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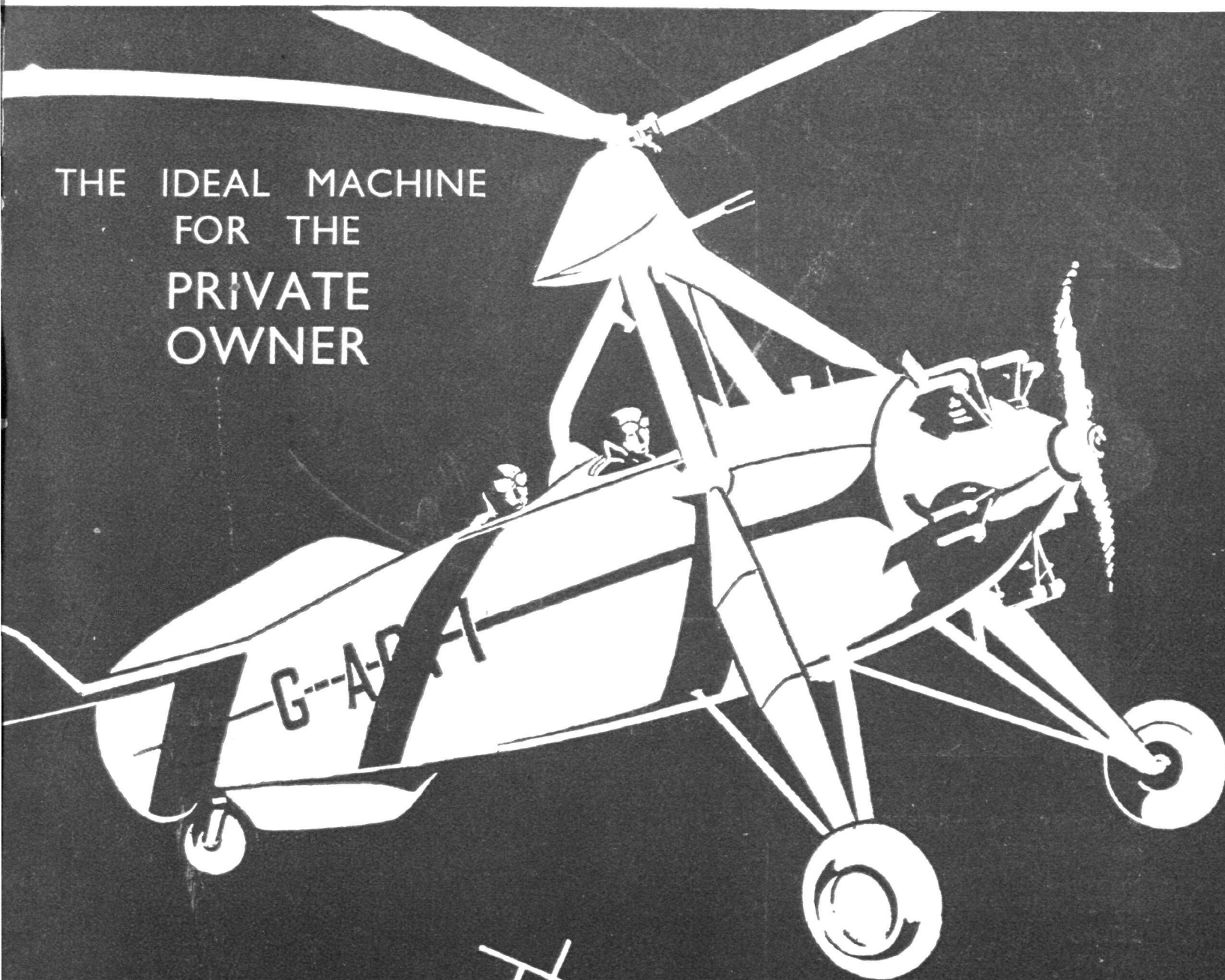
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OFFICIAL ORGAN OF THE ROYAL AERO CLUB

No. 1293  
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EVERY THURSDAY

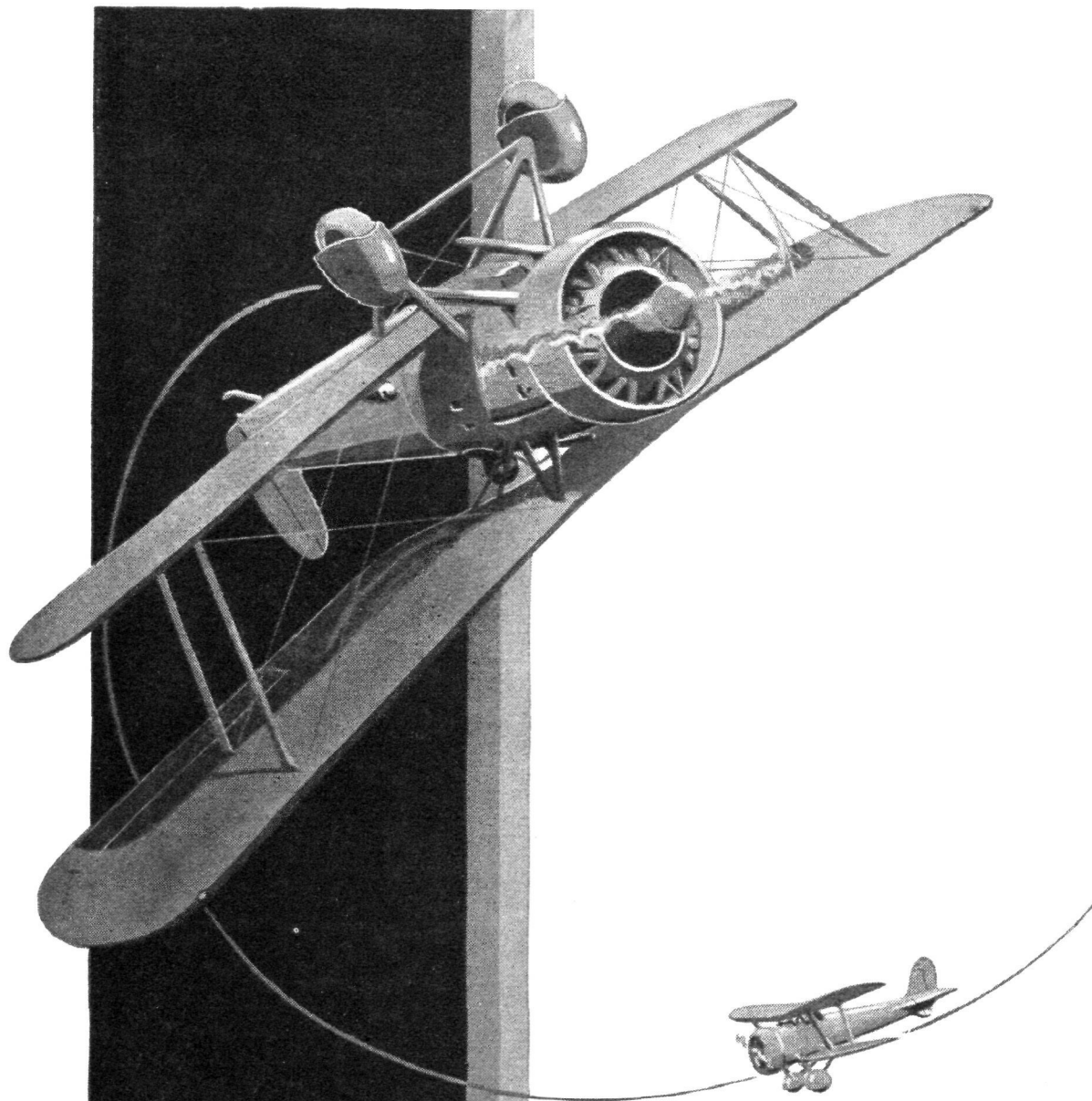
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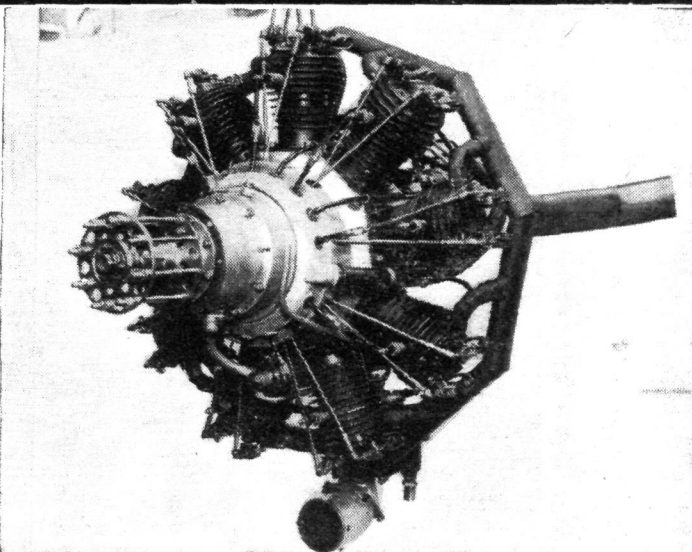
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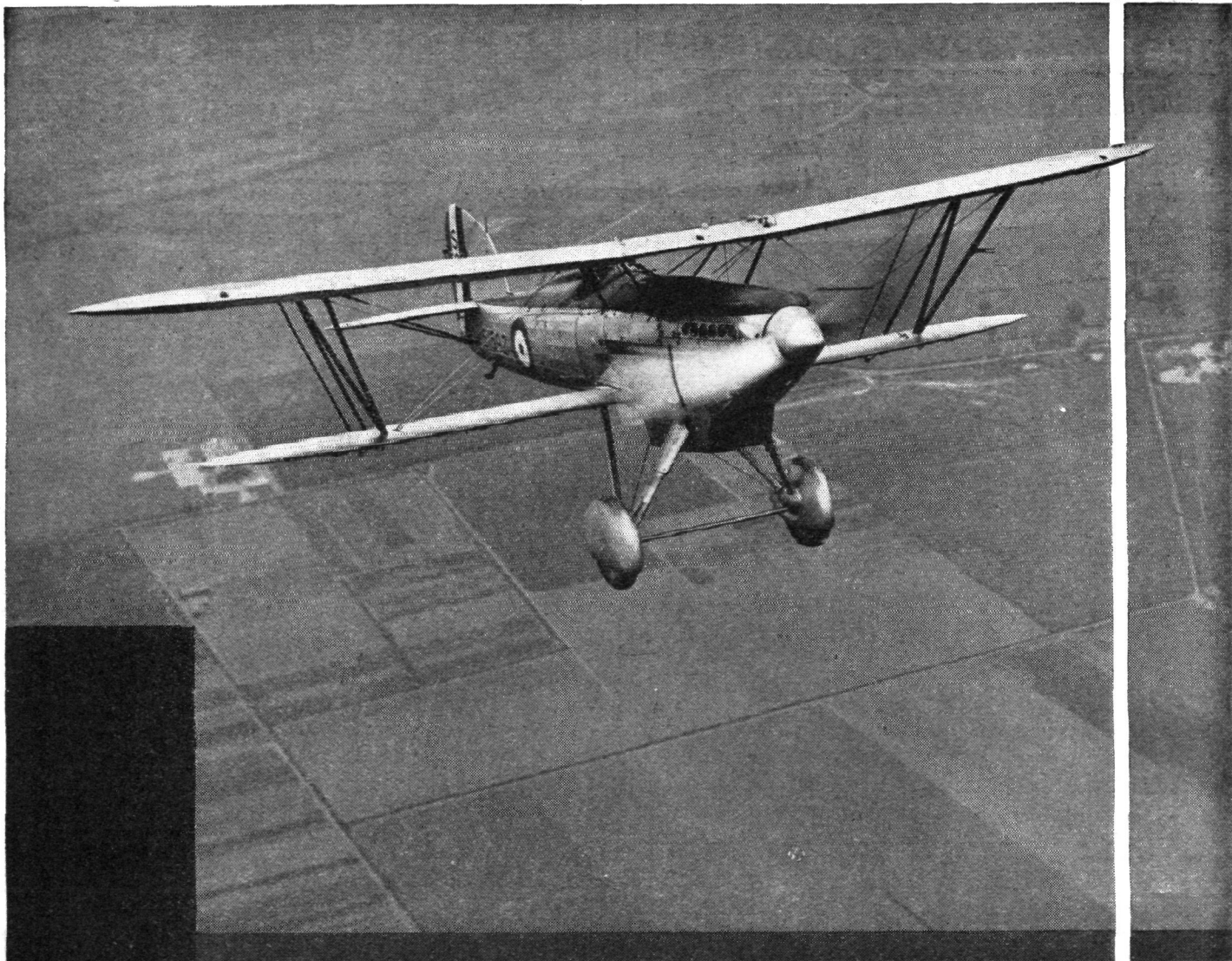
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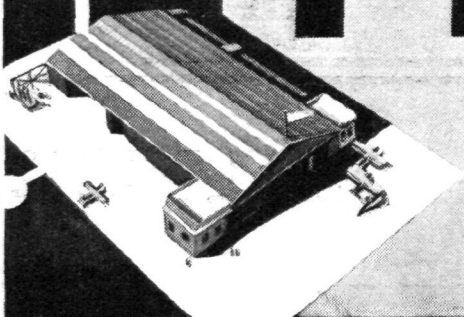
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## CONTENTS

	PAGE
Editorial Comment: •	
No More Bombing Areas .. .. .	987
What's in a Name? .. .. .	988
A Chance for Millionaires .. .. .	988
Supermarine "Scapa" .. .. .	989
R.101 Memorial .. .. .	990
Air Transport: Fast Air-France .. .. .	991
Fokker XX .. .. .	993
Air Mail Services .. .. .	996
L.E.C. Aeolus Engine .. .. .	997
Antoni Variable Wing .. .. .	998
From the Clubs .. .. .	1001
Airisms from the Four Winds .. .. .	1005
The New Westland "Wessex" .. .. .	1007
Airport News .. .. .	1008
Meteorological Broadcasts from Heston .. .. .	1010
Correspondence .. .. .	1011
Inverted Flying and the Compass .. .. .	1012
Royal Air Force .. .. .	1013
Air Post Stamps .. .. .	1014

## DIARY OF CURRENT AND FORTHCOMING EVENTS

Club Secretaries and others desirous of announcing the dates of important fixtures are invited to send particulars for inclusion in this list:—

- 1933.
- Oct. 5. Meeting of Private Owners at Royal Aero Club.
- Oct. 7-8. B.G.A. Gliding and Soaring Competition.
- Oct. 7-8. U.S. National Charity Air Pageant, Roosevelt Field, New York.
- Oct. 12. "Air Traffic Control," Lecture by Maj. R. H. S. Mealing before R.Ae.S.
- Oct. 14. Close of Exhibition of Air Force Artists' Association, at Natural History Museum, S. Kensington.
- Oct. 21. Annual Reunion Dinner of No. 6 Wing, R.N.A.S., and Nos. 66 and 67 Wings, R.A.F.
- Nov. 2. "Variable-Pitch Airscrew and Variable Gears," Lecture by W. G. Jennings before R.Ae.S.
- Nov. 3. Norfolk and Norwich Aero Club Annual Ball, at Thatched Assembly Rooms, Norwich.
- Nov. 16. "Stiffness of Aeroplane Wings," Lecture by H. Roxbee Cox before R.Ae.S.
- Nov. 25. Comrades of the R.A.F. Reunion Dinner, at Thames House Restaurant, Millbank, S.W.1.
- Nov. 30. "Tail Buffeting," Lecture by W. J. Duncan before R.Ae.S.
- Dec. 7. "Possible Future Development of Aircraft Engines," Lecture by A. H. R. Fedden before R.Ae.S.
- Dec. 8. Calshot Reunion Dinner, at R.A.F. Club, Piccadilly, W.1.
- Dec. 14. "Light Alloys for Aeronautical Purposes," Lecture by L. Aitchison before R.Ae.S.
- Dec. 15. Close of entries for International Touring Competition (1934), Poland.
- Dec. 18-24. International Rally at Cairo and Meeting of the F.A.I.
- 1934.
- Jan. 11. "Testing of Aircraft Landing Mechanisms and Some Factors Affecting Design," Lecture by W. D. Douglas, before R.Ae.S.

## EDITORIAL COMMENT



### No More Bombing Areas

OCTOBER 1, 1933, will be remembered as a date of some importance in the history of the Royal Air Force. On that date Headquarters, Central Area, R.A.F., formed at Abingdon. That sounds a rather harmless and not very significant fact. On the same day the name of the Wessex Bombing Area was changed to Western Area, R.A.F. That change of name suggests various reflections. At the same time it was announced by the Air Ministry that all the Cadre squadrons shall be taken from the administration of No. 1 Air Defence Group and shall be divided between the Western Area and the Central Area. No. 1 Air Defence Group remains in charge of the units of the Auxiliary Air Force. This also provokes speculation.

The formation of the new Area had not been quite unheralded. In June last it was announced that Air Commodore R. P. M. Mills, C.B., M.C., A.F.C., was to be Air Officer Commanding Oxford Bombing Area in October. Now, presumably, he will command the Central Area, R.A.F., which name is substituted for Oxford Bombing Area. Thus in place of having two Bombing Areas, each distinguished by a territorial name, we have two mere Areas, R.A.F., to be known by the uninspiring names of Central and Western. They have a certain territorial significance, certainly, but it is not much more effective than was the old title of Wessex. As the Wessex Bombing Area administered the units at Bircham Newton in East Anglia, so the new Western Area includes a bomber squadron at Manston in Kent. In these air-minded days we can foresee the railway companies advising holiday makers to "Come to the breezy Western Area—in Kent."

This new Western Area deals with the squadrons stationed at Aldergrove (Belfast), Boscombe Down, Manston (only No. 500 County of Kent Bomber Squadron), Waddington, Worthy Down, and Andover. All the squadrons at these stations, except those at Andover, are night bomber squadrons. At Andover are No. 12 (Bomber) Squadron flying "Harts" and No. 101 (Bomber) Squadron flying

"Sidestrands." The Central Area deals with the units at Abingdon, Bicester, Bircham Newton, Filton, Hucknall, and Upper Heyford. All the squadrons at these aerodromes are day bombers, except No. 99 B.S. at Upper Heyford, which it is understood will presently be moved to another aerodrome where other night bomber squadrons are stationed. It would scarcely be possible to transfer Nos. 12 and 101 Squadrons to the Central Area, as Andover, where they live, is the Headquarters of the Western Area. With these two exceptions, we now have one Area of day bombers and one Area of night bombers. This will probably make for ease and efficiency in operation.

The decision to transfer all the Cadre squadrons from No. 1 Air Defence Group to one of the Areas may be only because new ideas on the best way of administering them have come to prevail. Cadre squadrons are composite. Each squadron has one flight composed of regular personnel, while the other flight or flights are composed of Special Reserve officers and airmen, who are non-regular. Hitherto No. 1 Air Defence Group has administered all squadrons which have a non-regular element, namely the Cadre Squadrons and the Auxiliary Air Force Squadrons. Now the citizen element is to be divided, the Auxiliaries remaining under No. 1 Air Defence Group, while the Special Reservists will come under one or other of the Areas. The new policy seems of doubtful wisdom. The Cadre squadrons depend for their fighting efficiency on the ability of the regular element to bring the Special Reservists up to their own level of efficiency or as near it as may be. It is always rather a specialist job to get the best out of non-regular fighting men, and No. 1 Air Defence Group existed in order to specialise on that job. There is a possibility that the staffs of the Areas, who have to deal mainly with regulars, may lack the special experience which is necessary when dealing with non-regulars. They may not have all the sympathy which is desirable with the commanding officers of the Cadre squadrons in their special problems of making civilians into thoroughly efficient pilots, officers, and airmen. Any impatience or lack of understanding by the Area Headquarters may have a serious effect on the numbers of the Special Reservists, and so on the fighting efficiency of the squadrons. If citizen airmen are not keen and efficient, then their low cost to the country may turn from an economy into an extravagance. However, we hope that our forebodings will not be justified by the result. We have seen some extremely keen and very efficient Special Reserve officers and airmen at work, and we hope that that happy state of affairs will continue under the new arrangement. Fortunately the Auxiliary Air Force remains unaffected by the reorganisation.

❖ ❖ ❖ ❖

It is notable that the word "Bombing" has been banished from the names of both Areas. It is only to be supposed that this is due to the Geneva spirit. The Disarmament Conference, whose distressing and

What's in  
a Name?

recurrent deadlocks fill so many columns in our papers, has caused a lot of discussion about the horrors of bombing from the air. Many private persons, who have given insufficient consideration to the subject, have waxed eloquent in print and on platforms on those horrors, and so the idea may have arisen

(though it sounds fantastic enough) that by maintaining Bombing Areas, Great Britain puts a black mark against her own name, and proclaims herself an exponent of the gentle arts of frightfulness and baby-killing. If so, let the accursed name be blotted out from the pages of our *Air Force List*. Surely a Western Area and a Central Area must be pure and uncontaminated. They may on occasions drop bombs, but no one can now call them Bombing Areas.

The particular brand of pacifist whose chief *bête noir* is an efficient Navy, because of its great expense, has lately been rather inclined to crow because he, quite unjustifiably, concluded from some descriptions of the recent coast defence exercises that the Air Force could bomb a fleet out of existence in a few minutes. To him the air bomb became, temporarily at any rate, a thunderbolt from heaven to destroy that wicked thing, Naval Defence. "Up with the air bomb; down with the battleship!" has been his cry. The bomb may be wicked too, but at least it is a cheaper form of wickedness, and as such is to be approved.

Of course, to be logical, we ought to alter the titles of all the bomber squadrons. It is not much use to have two blameless Areas if they administer squadrons whose title suggests baby-killing. We have often argued, and so has Mr. Winston Churchill, that the air bomb can only effect its proper share in the winning of a war when it is used as a destroyer of *matériel*, as the high-explosive shell is used. As a man-killer the air bomb is not a very effective weapon, and a commander who uses his forces for the single purpose of winning a war will not forget this fact. To misuse the heavy air bomb for the killing of a civilian population would be not only to blacken one's own face, as our Indian soldiers say, but would be a waste of considerable and valuable effort. We certainly ought not to be ashamed of giving the title "Bombing" or "Bomber" to our Areas and our squadrons. It is only the equivalent of "Air Artillery."

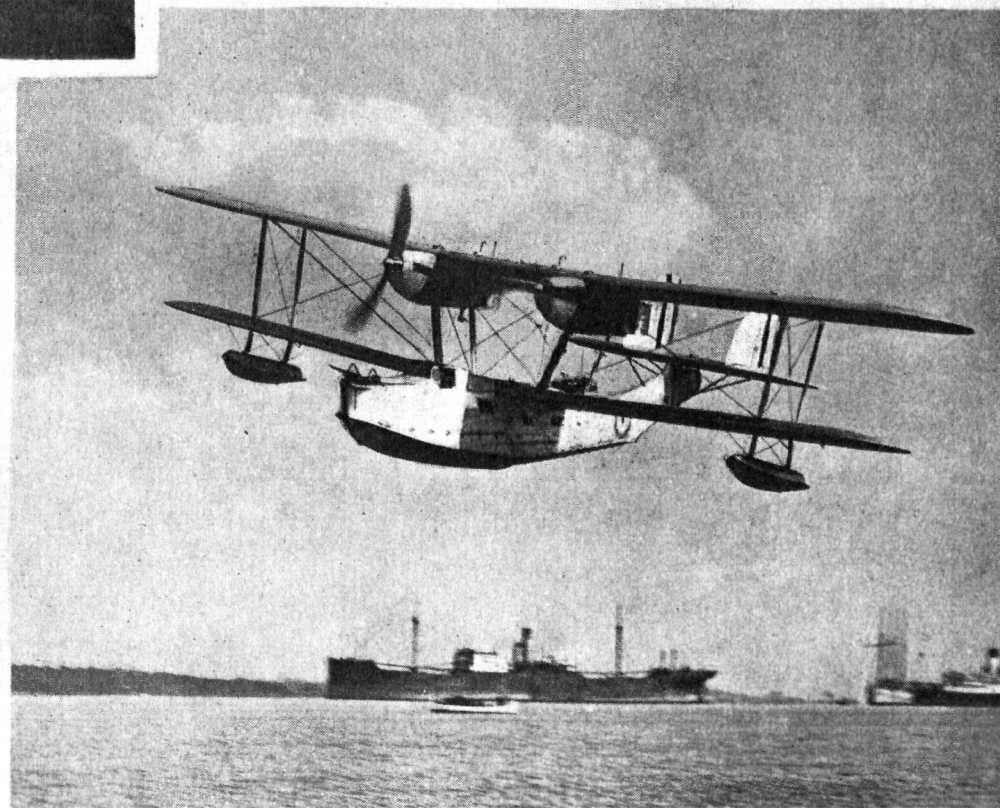
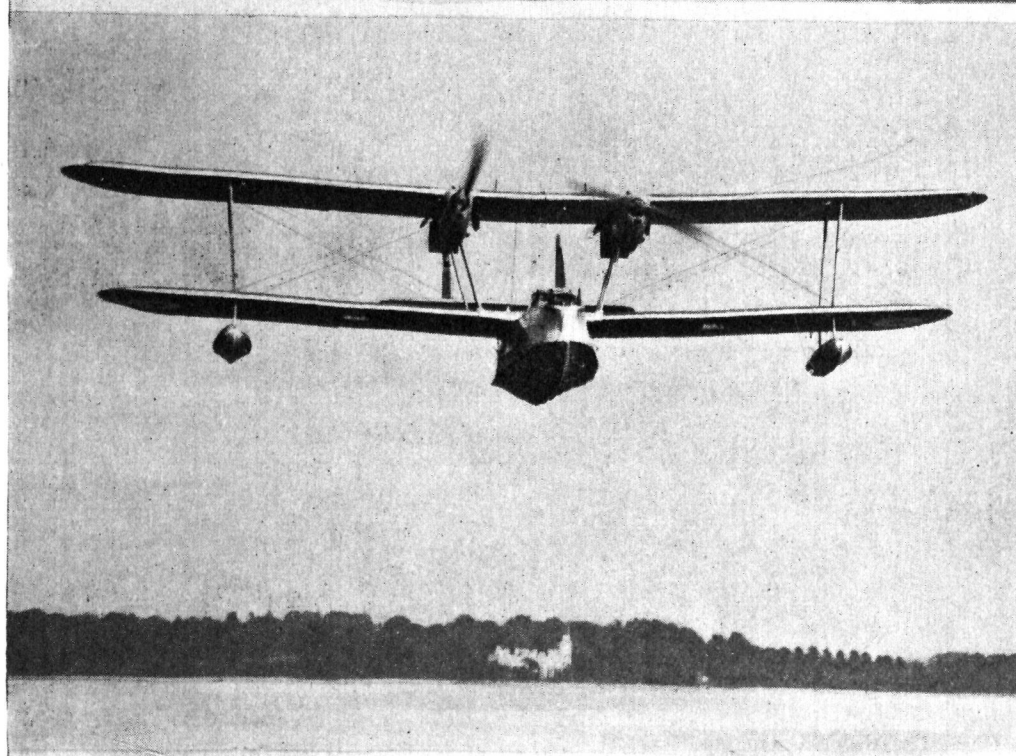
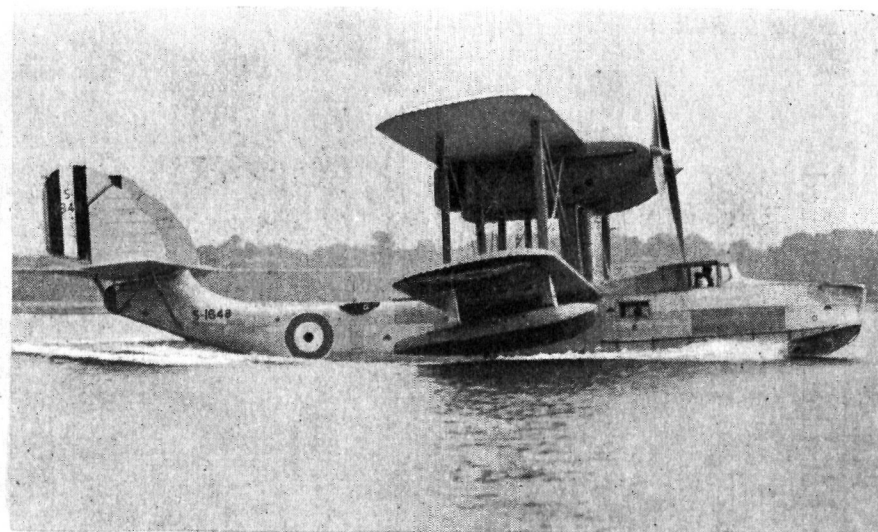
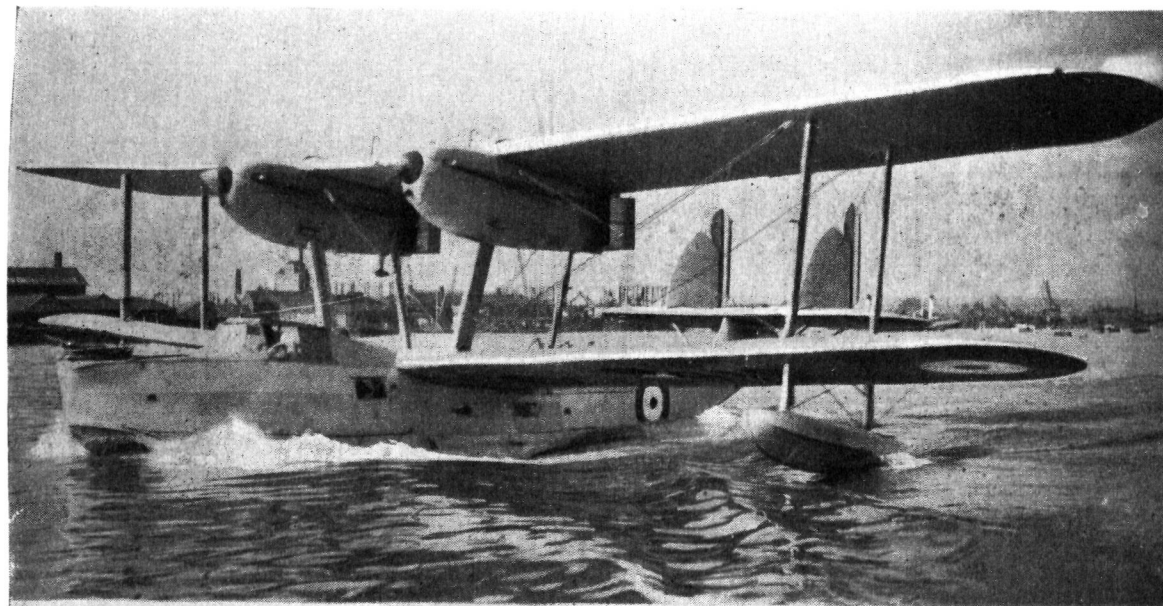
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Sir MacPherson Robertson, an Australian patriot, has offered a number of prizes for an international air race from Great Britain to Australia, the first prize for speed being £10,000 and a gold cup. British

designers have not so far had any reason to produce a machine of a type likely to do the fastest time in such a race, and unless the position is altered, it seems probable that a race instituted to celebrate British enterprise in founding the State of Victoria 100 years ago is likely to develop into a contest between various foreign machines. There would be an element of tragic irony in such a development.

It is not doubted that our designers could produce an aeroplane which would at least put up a very good show in such a race, but the cost of doing so would be very high. The winning of the first prize, supposing that it were won, would barely cover the out-of-pocket expenses. To say this is not to cast any reflection on the generosity of Sir MacPherson Robertson. It merely opens a chance for some other rich man or woman to do likewise. If a similar amount were to be offered as a prize to the winner, provided that that winner were British, then there would be sufficient incentive to our firms to set to work on a new and interesting type of aeroplane. *Verbum sapienti satis.*

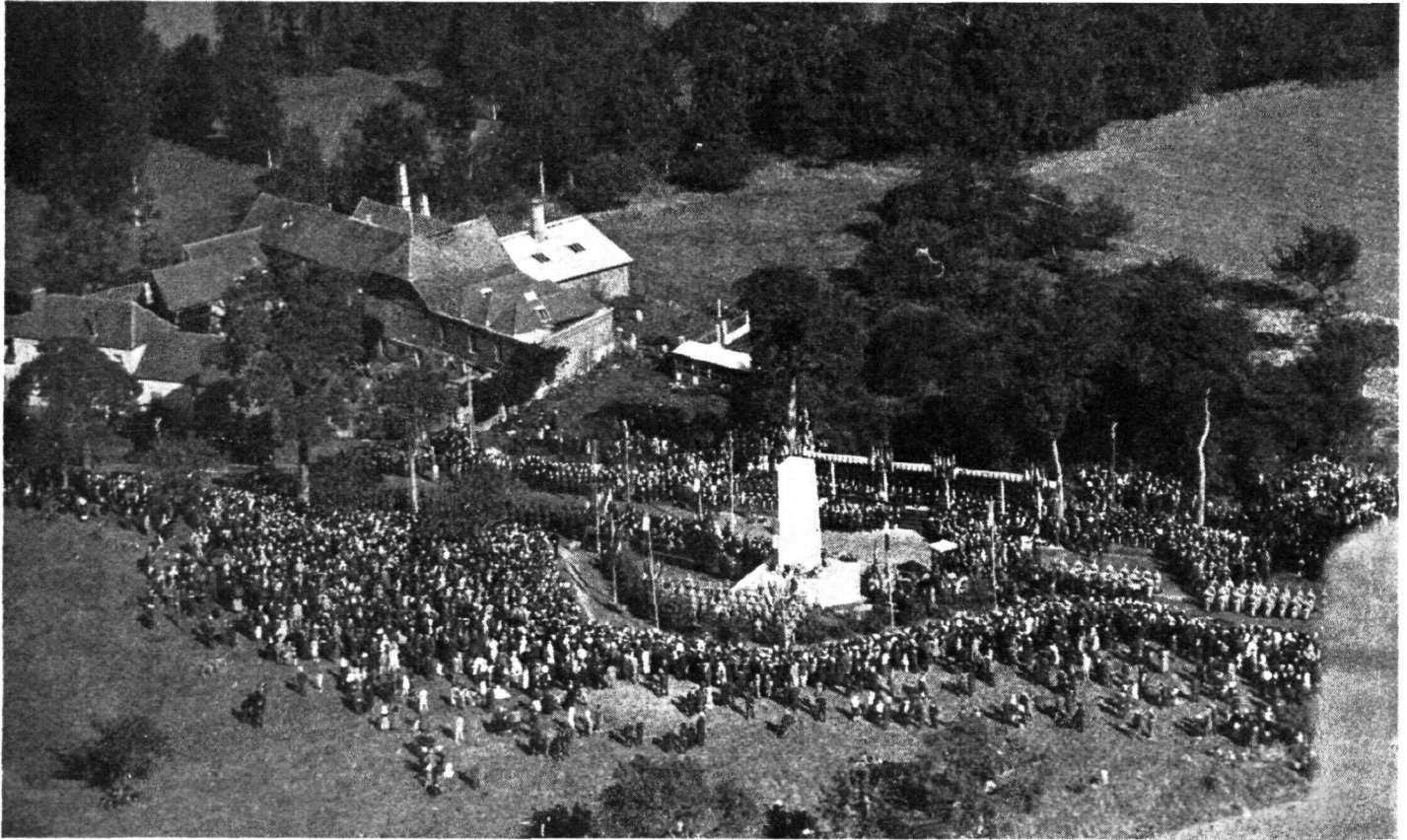




THE SUPERMARINE "SCAPA": This is the name given to the production model. The prototype was known as the Supermarine "Southampton IV." The engines are Rolls-Royce "Kestrels."

## THE R. 101 MEMORIAL

Mr. Ramsay MacDonald, and M. Daladier, on October 1, unveiled the memorial to the men who lost their lives in the R.101 disaster on October 5, 1932. The photo below was taken from the air during the unveiling ceremony



THE memorial at Alonne to the memory of those who perished in the disaster to the airship *R.101* three years ago was unveiled by the British and French Prime Ministers, Mr. MacDonald and M. Daladier, on Sunday, October 1. Lord Londonderry and M. Cot, the Air Ministers of the two countries, were also present, as well as the six survivors, Messrs. Bell, Binks, Cook, Disley, Leech, and Savory, relatives and friends of those who died, and Air Marshal Sir Hugh Dowding, Lt. Col. Shelmerdine, Sqd. Ldr. Nixon, O.B.E. (Superintendent, Royal Airship Works), and Air Commodore R. Williams, C.A.S., Royal Australian Air Force. A guard of honour was provided by the 1st Regt. of Chasseurs. The ceremony was opened by the Maire of Alonne, after which M. Daladier made a speech, in the course of which he said that they could never forget what sufferings and hopes Great Britain and France had known together. The men of *R.101* had set out to blaze a new trail from end to end

of the British Empire. Mr. MacDonald, in his speech, said:—

“M. Daladier has most kindly referred to the high hopes of that gallant gentleman and brave soldier, my old friend, Lord Thomson. His fate has been the fate, will yet be the fate, of many a man and woman who started on a great mission. They could not reach the goal, but they died in the faith. May their example be followed by all who set forth on the path of the pioneer.”

The National Anthems of both countries were played, troops marched past, and a squadron of French military aeroplanes and No. 25 (Fighter) Squadron, R.A.F., flew past overhead. The six survivors then visited the nuns who had cared for them in Beauvais hospital. The memorial has been erected jointly by the British and French peoples.



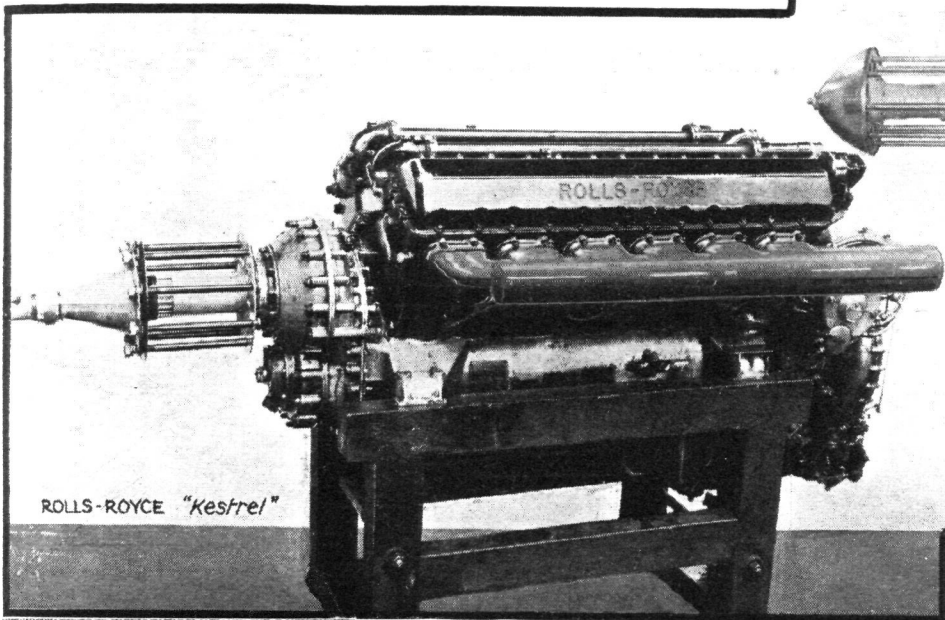
### B.A.N.C.O.'s Crash

It is with the greatest regret that we have to record the deaths of three persons in a crash in a Percival “Gull” (Napier “Javelin”), owned by the British Air Navigation Co., Ltd., of Heston Airport. Capt. A. J. Styran, the pilot; Mr. Ian. C. MacGilchrist, chairman of the company; and Mr. Bertram Wilson, a photographer on the staff of the *Daily Sketch*, were returning from Beauvais, after witnessing the *R.101* memorial ceremony on Sunday, October 1, when they crashed in poor visibility at Old Place, Sandhurst, a few miles from Hawkhurst, in Kent. According to an account in *The Times*, a farm labourer near the scene of the accident heard two aeroplanes flying overhead, then one went away, and the other's engine seemed to be throttled back, after which the crash occurred. The three occupants must have been killed instantly. “Bill” Styran was well known in aeronautical circles, and a most likeable personality. He was a director

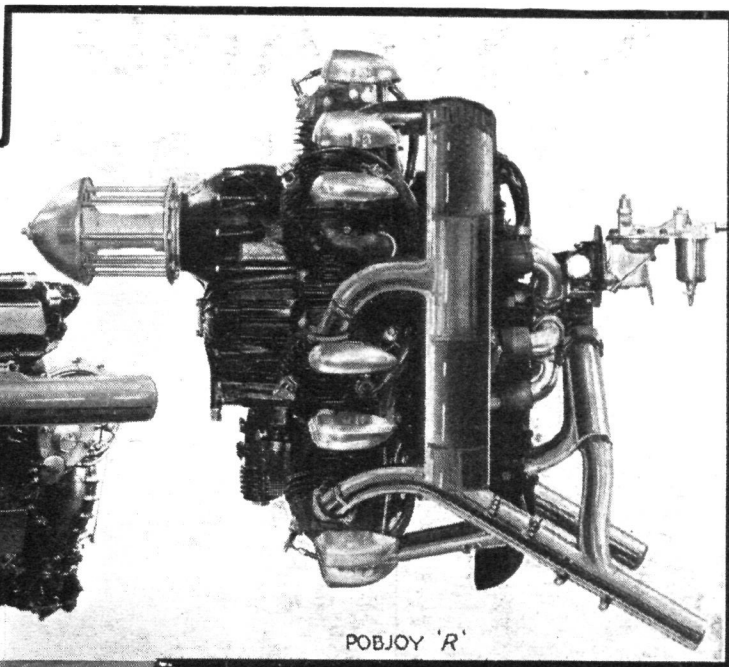
of B.A.N.C.O., and has been flying for them since they started in January, 1932. He served in the R.A.F. and the Irish Flying Corps, and was a frequent competitor in air races, last year winning the Folkestone Trophy Race in Mr. MacGilchrist's Comper “Swift” (“Gipsy”), and this year gaining third place in the King's Cup with Mr. Hall Caine's “Leopard” (“Gipsy Major”). Mr. MacGilchrist was the man who made the existence of B.A.N.C.O. possible, and backed it from the start. He did a considerable amount of flying himself as a passenger, and was also learning to fly with the Airwork Flying School at Heston. He was quite a young man who had a keen appreciation of the possibilities of aviation, and the loss of both him and Capt. Styran is one which can ill be afforded. A memorial service was held at St. Columba's Church, Pont Street, London, W.1, at 2.30 p.m. on Thursday, October 5. We offer our sincerest sympathies to the relatives of these men and to the firms which have lost their valuable services.



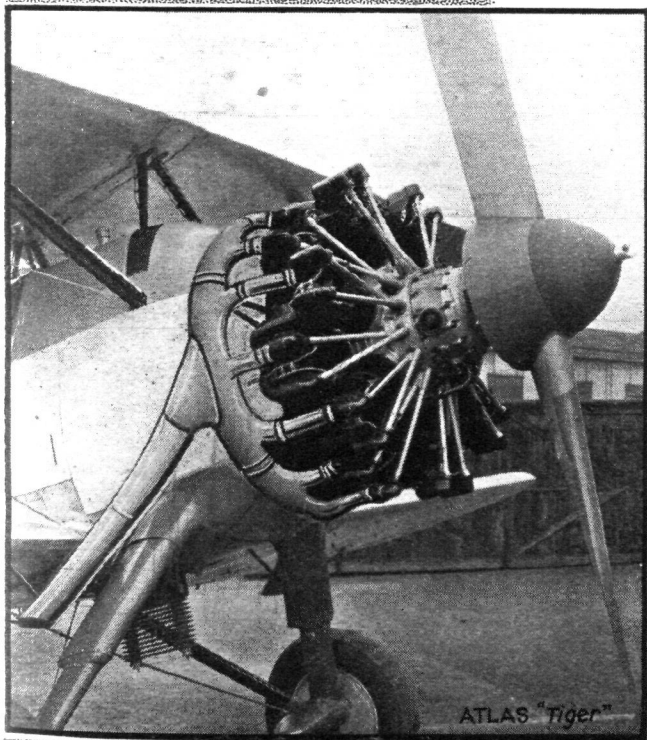
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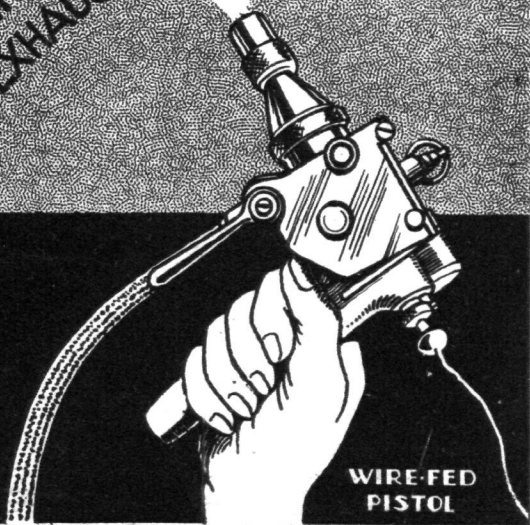
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ATLAS "Tiger"

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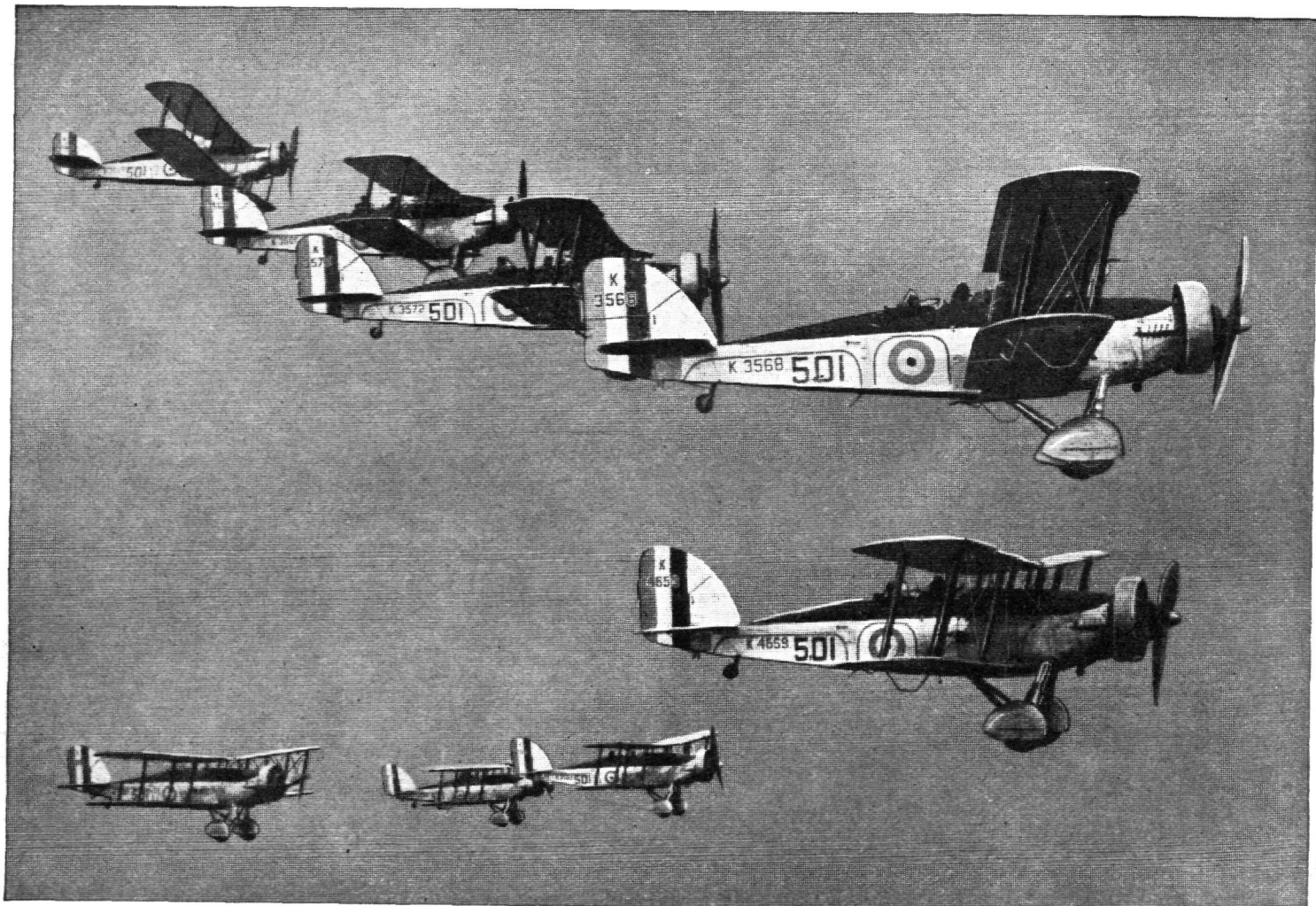
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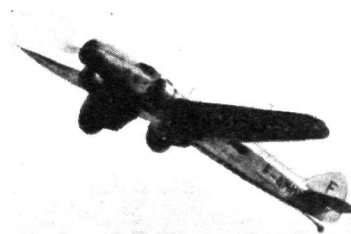
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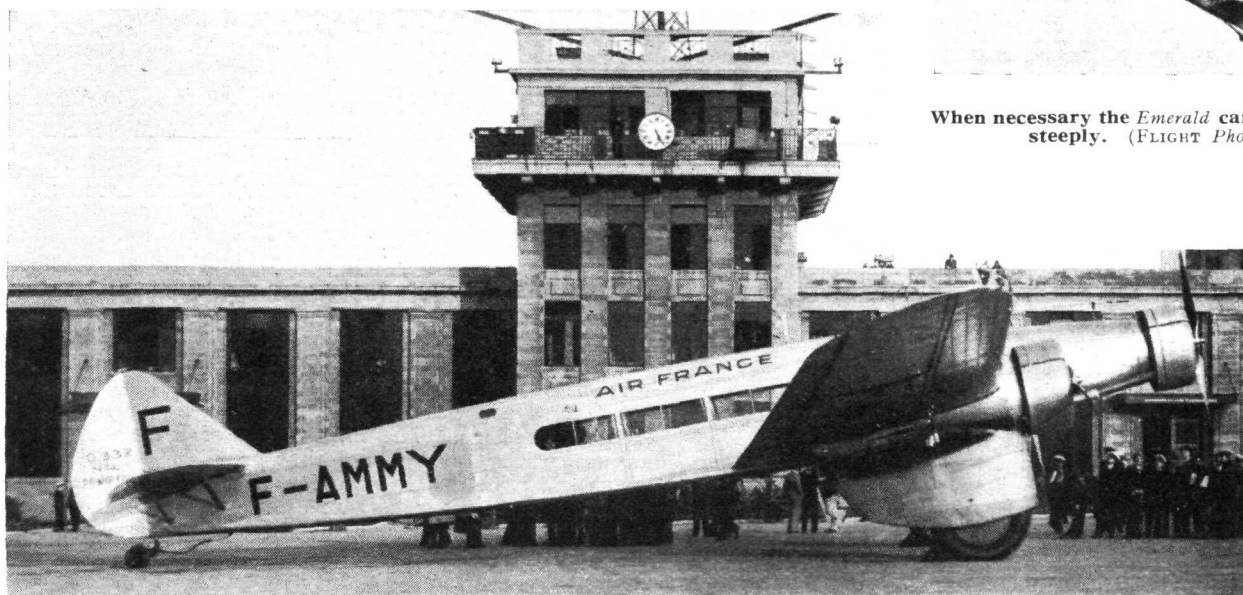
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# Air Transport



When necessary the *Emerald* can climb very steeply. (FLIGHT Photo.)



The passengers have large windows in the cabin of the *Emerald*. (FLIGHT Photo.)

## FAST AIR - FRANCE

ON Tuesday, September 26, we were privileged to try the latest addition to the Air-France fleet. This aeroplane, the Dewoitine D.332, has already been described (see FLIGHT for August 10), but until last Tuesday it had not been seen in this country.

This particular machine, the prototype of the class, and called *Emerald*, has already achieved fame by flying to Russia with M. Pierre Cot, the French Air Minister, and party, and also by the new world's records which it obtained shortly before that flight, at Villacoublay Aerodrome, on September 7, with a crew composed of Marcel Doret, the Chief Pilot of the Dewoitine Co., Capt. Terrasson and Lt. Lecame, of the testing staff of the Service Technique, and two mechanics. The records were:—

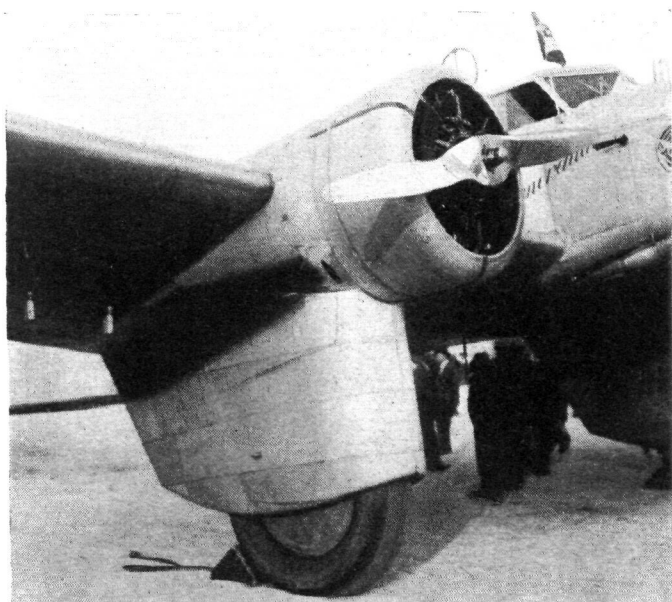
1. For 1,000 km. (621 miles), carrying a useful load of 2,000 kg. (4,400 lb.) at an average speed of 259 km.p.h. (161 m.p.h.).
2. For 2,000 km. (1,242 miles), with a useful load of 500 kg. (1,100 lb.) at an average speed of 255 km.p.h. (158 m.p.h.).
3. For 2,000 km. with a useful load of 1,000 kg. (2,200 lb.) at an average speed of 255 km.p.h. (158 m.p.h.).
4. For 2,000 km. with a useful load of 2,000 kg. (4,400 lb.) at an average speed of 255 km.p.h. (158 m.p.h.).

In addition to the 2,000 kg. of useful load, the plane carried more than 630 kg. (1,386 lb.) additional cargo represented by its equipment, the radio apparatus and the five men of the crew.

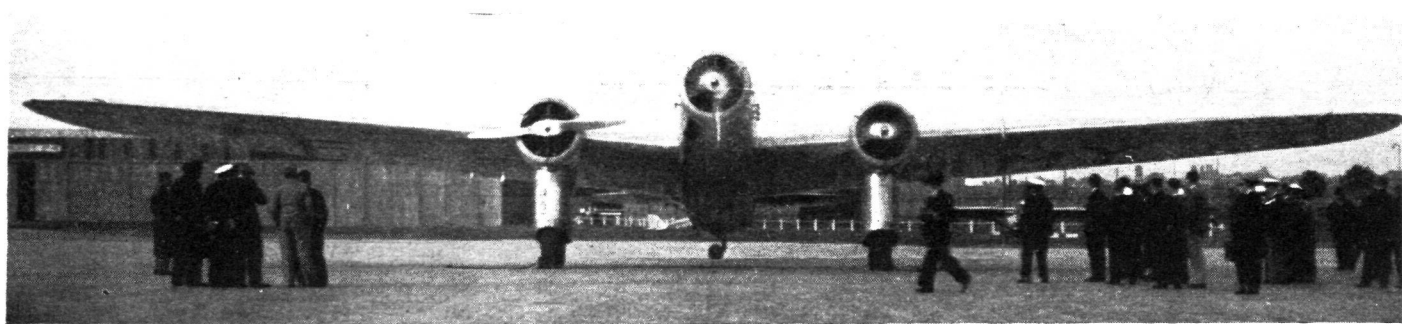
The take-off, with an all-up weight of 10,886 kg. (23,849 lb.) was effected in 300 m. (975 ft.), with the engines running at 1,950 r.p.m. This rate was reduced to 1,750 r.p.m. for the rest of the flight.

In addition to making these new records this Dewoitine D.332, during its recent trial flights to obtain its navigation certificate, flew at the rate of 300.8 km.p.h. (187 m.p.h.) over the regulation course of the Service Technique at Villacoublay.

From a flying point of view the *Emerald* is very interesting. Its controllability over a very large speed range is remarkably good. We found that in the air one still had ample control at the bottom end of the range, when the A.S.I. was showing 100/110 km.p.h. (62/68 m.p.h.), while at the top speed of about 300 km.p.h. (187 m.p.h.) the controls, though naturally heavier, were not for such a large machine, unduly so. A point about the controls which we found particularly pleasing was the fact that they were almost all of the same weight. Being unbalanced and large they are, of course, heavy, but having the elevators about the same weight as the ailerons made the machine far nicer to fly than is often the case with aeroplanes of this type. The trimming gear, both for the elevators and the rudder, was very effective, and it was quite possible to trim the machine to fly "hands and feet off" for any degree of climb or turn and at any speed. The rudder trim is achieved by a small adjustable flap which is a portion of the trailing edge of the rudder, and this is worked by screw gearing from a conveniently



This shows the clean way in which the wing engines have been streamlined into the wing and undercarriage fairing. This latter forms an excellent shield to prevent the glare of the landing flares disturbing the pilot. (FLIGHT Photo.)



It is difficult to imagine anything cleaner aerodynamically, than the *Emerald* when viewed from ahead.  
(FLIGHT Photo.)

placed knob on the central throttle control block in the pilots' cabin. It was rather edifying to fly this large machine with one engine cut out and to be able to trim it to turn against the other engines without the necessity for undue pressure on the controls. The performance on two engines at ground level was good, and inspired one with confidence, while even with the two wing engines throttled right back, height was maintained with the load we had on board. This was not the same as the machine would carry if it were running on the short routes like that between London and Paris, but the accommodation which had been allowed for passengers on the service between London—India and Indo-China, and upon which it is proposed to use these machines, was full. This consists of eight chairs in the cabin, all of which can be extended to allow of the passengers sleeping at night.

The idea of this service is that the stages should each start at midnight, as soon as certain night landing and directional wireless facilities have been arranged on the route, and that the passengers will, after having flown through the night, be given practically the whole of the next day for sightseeing on the ground. The first landing will be made at Rome, and thereafter at Damascus, Karachi, Rangoon and Saigon.

The cabin of the *Emerald* is, with this accommodation, very roomy indeed, and is not particularly noisy, though the metal airscrews give rather a high-pitched note.

Looked at from an aeronautical standpoint, the D.332 is remarkably "clean" for an aeroplane of this size. The engines, as can be seen from our photographs, are fully cowled and streamlined into the wings and fuselage, which no doubt accounts to a large extent for the performance. An interesting point is the circular, oval-section copper tube oil-cooler which is carried concentric with

the N.A.C.A. type cowling and attached to the face of each engine directly behind the airscrew.

Although the D.332 is an all-metal low-wing monoplane with metal covering, the wing flexes quite a considerable amount during a steep climb or similar manoeuvre. Distortion of the ailerons and possible jamming is avoided by having the trailing part of the wing surface in nine separate sections. The inner three of these on each side are secured by turnbuckles, thus providing adjustable flaps which may be used both for permanently altering the camber of the inner portion of the wing surface and also for trimming the machine. The outer six sections form each aileron, and appear to be connected together with some fairly flexible spar.

The slow-flying capacity of the machine was most impressive, and on the pilot's arrival at Croydon his demonstration made us sure that wing flaps were fitted. This was not the case, however. This slow speed could be used right down to the ground, so that, in conjunction with the powerful brakes, extremely short landings could be made.

On its arrival in England, carrying, among the passengers, M. Allegre, the managing director of Air-France, the *Emerald* was flown by M. Marcel Doret, chief test pilot to the Dewoitine company. He was wearing the Air-France Senior Pilot's uniform, but this was only temporary, we understand, for the Russian flight.

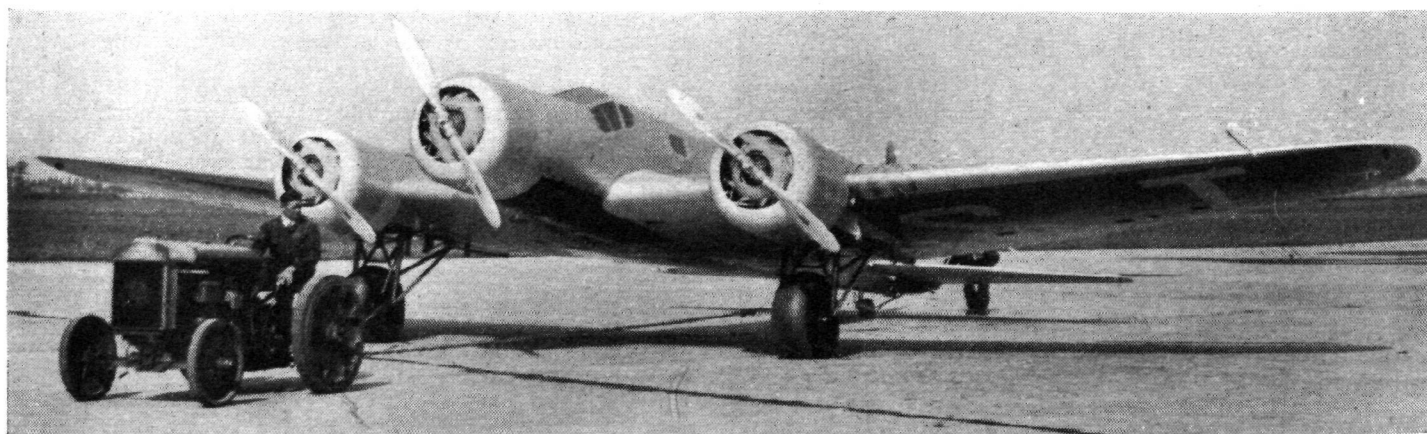
One point which struck us as deserving criticism in the pilot's cockpit was the total lack of provision for seeing what is in the air above or behind the machine. The roof of the cockpit is large and lends itself perfectly well to having windows in it, and, the machine being a low-wing type, it would with these have been possible to see out quite well.

## The "Aerial Phost"

WE are indebted to Shell Mex & B.P., Ltd., for the following particulars of the new Pander mailplane, illustrated below:—

"The Pander S.4 machine, registered PH-OST and named *Postjager*, is a low-wing monoplane with a retractable undercarriage. Split flaps are fitted on the trailing edge of the wings to enable the machine to be landed more slowly than is usually the case with this type of aircraft. The fuselage is of wooden construction and is divided into three compartments, the front forming the cockpit, the centre the radio compartment, the third in the rear being used for mails. The wing roots are faired into the fuselage

with electron plate (a light magnesium alloy) and the resulting smooth contours will considerably decrease the wing vortices and reduce drag. The cockpit is lined with "glass wool," which will form a fireproof wall and at the same time reduce noise. The roof of the cabin is fitted with unsplinterable glass panels. Three 450-h.p. Wright "Whirlwind" engines, with N.A.C.A. cowling, are fitted. The maximum speed will be 370 k.p.h. (230 m.p.h.), and the cruising speed 300 k.p.h. (186 m.p.h.). With an overall length of 11 m. (36 ft.) and wing span of 16.4 m. (53.8 ft.) the machine will have a total weight of 5 tons and a pay load of 500 kg. (1,100 lb.). The wheels, fitted with Goodyear balloon tyres, have Messieroil shock absorbers."





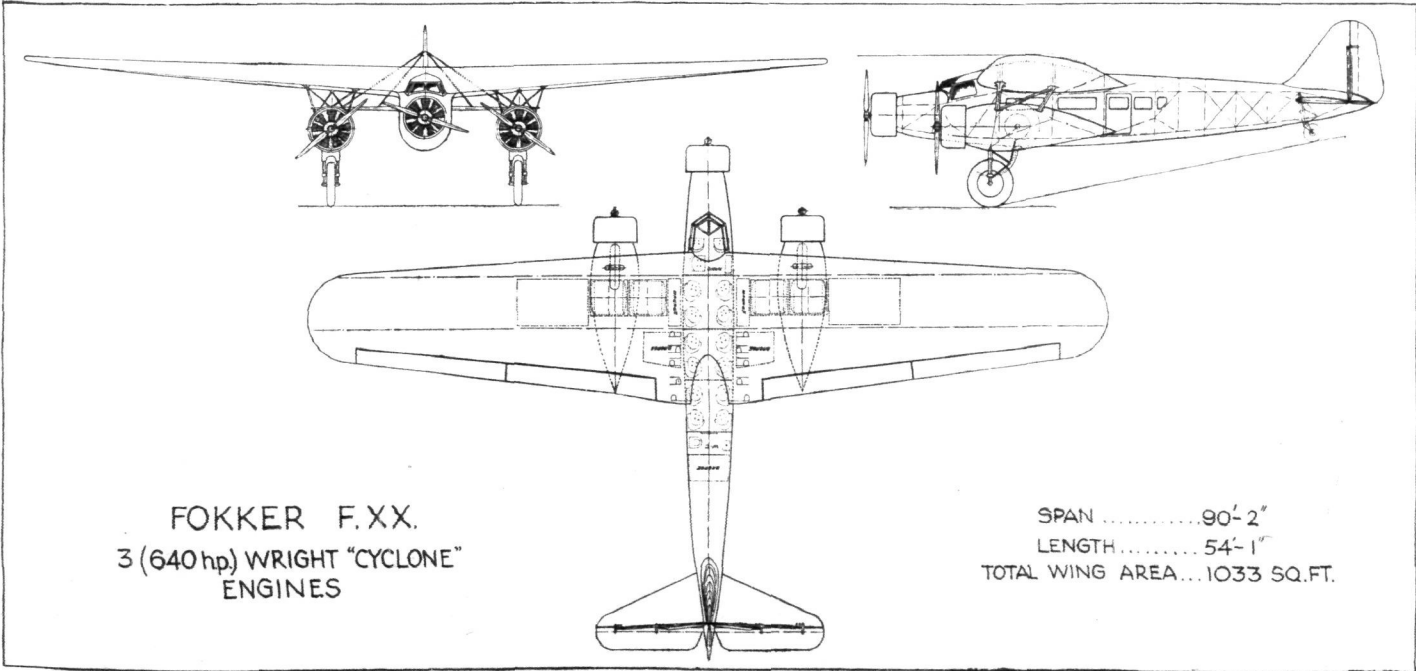


THE FOKKER F.XX

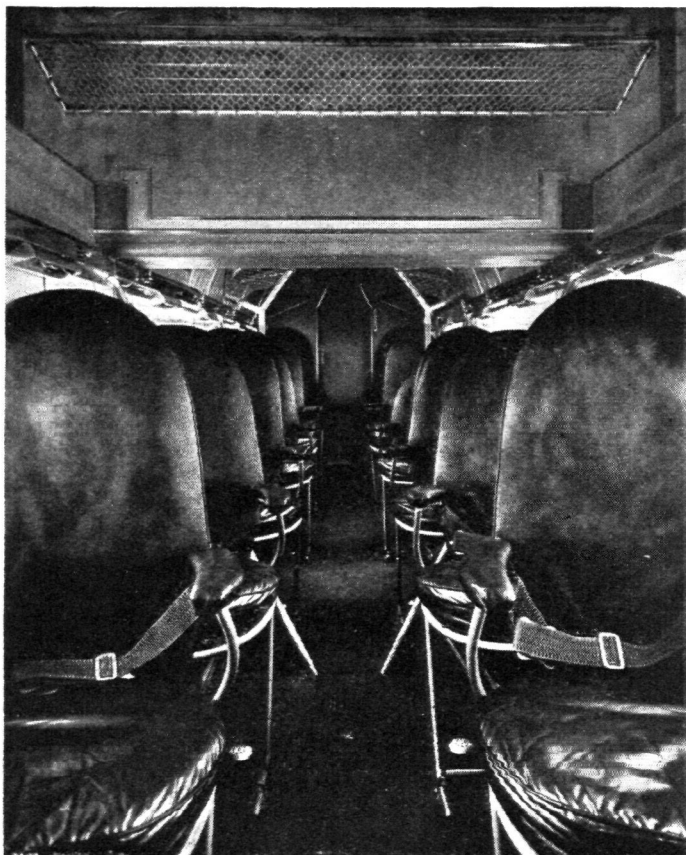
BRIEF references have been made from time to time to the two new types of aeroplane which N. V. Nederlandsche Vliegtuigenfabriek of Amsterdam have had under construction, and illustrations of the first machine of the smaller of the two types have been published (see our issue of August 24, 1933. This week we are able to publish a more detailed description and a number of photographs of the F.XX, a three-engined high-wing cantilever monoplane of typical Fokker construction (welded steel tube fuselage and wooden wing), in which high performance has been obtained without sacrificing comfort. The only direction in which greater comfort might possibly have been secured would be by doing away with the engine in the nose of the fuselage. The Fokker designers are, however, of the opinion that a twin-engined machine would not be suitable for the particular work for which the F.XX is intended, and the extra complications of

THE FOKKER F.XX			
3 Wright "Cyclone" Engines			
Dimensions			
Length o.a.	.. .. .	54 ft. 1 in.	
Wing span	.. .. .	90 ft. 2 in.	
Wheel track	.. .. .	19 ft. 8 in.	
Length of cabin	.. .. .	16 ft. 1 in.	
Width of cabin	.. .. .	5 ft. 1 in.	
Average height of cabin	.. .. .	6 ft. 3 in.	
Volume of cabin	.. .. .	406 cu. ft.	
Wing area (incl. ailerons)	.. .. .	1,033 sq. ft.	
Weights			
Bare weight	.. .. .	11,790 lb.	
Disposable load	.. .. .	7,715 lb.	
Gross weight	.. .. .	19,505 lb.	
Cabin equipment, etc.	.. .. .	1,100 lb.	
Crew of three	.. .. .	530 lb.	
Fuel and oil	.. .. .	1,850 lb.	
Pay load	.. .. .	4,235 lb.	
Wing loading	.. .. .	18.8 lb./sq. ft.	
Power loading	.. .. .	10 lb./h.p.	
Range	.. .. .	400 miles.	
Range with full tanks	.. .. .	1,000 miles.	
Weight of fuel and oil	.. .. .	2,975 lb.	
Pay load	.. .. .	3,100 lb.	
Performance			
Maximum speed	.. .. .	186 m.p.h.	
Cruising speed	.. .. .	154 m.p.h.	
Minimum speed (without flaps)	.. .. .	73 m.p.h.	
Minimum speed, using flaps	.. .. .	64 m.p.h.	
Climb to 3,300 ft. in 3.6 min.			
Climb to 6,600 ft. in 8 min.			
Climb to 13,000 ft. in 22 min.			
Service ceiling	.. .. .	17,500 ft.	
Absolute ceiling on 2 engines	.. .. .	10,500 ft.	

a four-engined installation were not considered justified in a machine of this size; hence the three-engined arrangement was chosen. A larger machine is being built, in which the four engined disposition of the power plants will be used. The F.XX has a gross weight of approximately 9 tons. The high performance (maximum speed 186 m.p.h., cruising speed 154 m.p.h.) has been attained partly by fitting powerful engines, partly by using a streamline fuselage of oval section, and partly by using retractable undercarriages. The great depth of the cantilever wing has been utilised to give headroom in the cabin—there is a minimum height of 6 ft.—so that the fuselage proper is of relatively small depth. The seating accommodation provides for 12 passengers, the chairs being placed in the orthodox way, in a row along each side of the cabin, with an aisle between them. With this cabin arrangement the machine carries petrol for a range of approximately 400 miles in still air. As the cruis-



THE FOKKER F.XX : General arrangement drawings to scale.



**THE CABIN, LOOKING AFT:** There is comfortable seating accommodation for 12 passengers.

the fuselage and ailerons, and result in a reduction of about 9 m.p.h. in the landing speed, giving a speed range of very nearly 3 to 1. The ratio of gross weight to tare weight is 1.654, so that the machine carries as disposable load 65 per cent. of its tare weight. This is a fairly common ratio, but indicates that the cantilever wing need not lead to an unduly heavy structure if a fairly high wing loading is employed.

The engines are Wright "Cyclones" of 640 b.h.p. each, at 1,900 r.p.m., and when the machine is fitted up for 12 passengers, and carries a crew of three, and fuel and oil for 400 miles, the actual pay load is 4,235 lb., or 2.2 lb./h.p., based on maximum power. The machine cruises on 1,280 b.h.p., however, and the pay load per cruising h.p. is therefore 3.3 lb. In view of the high cruising speed this cannot be considered an excessive power expenditure.

As already mentioned, the Fokker F.XX is structurally similar to other Fokker machines, with a welded steel tube fuselage and an all-wood wing. The fuselage is covered with fabric, except immediately behind the engines, where the covering is electron sheet. The wing covering is plywood.

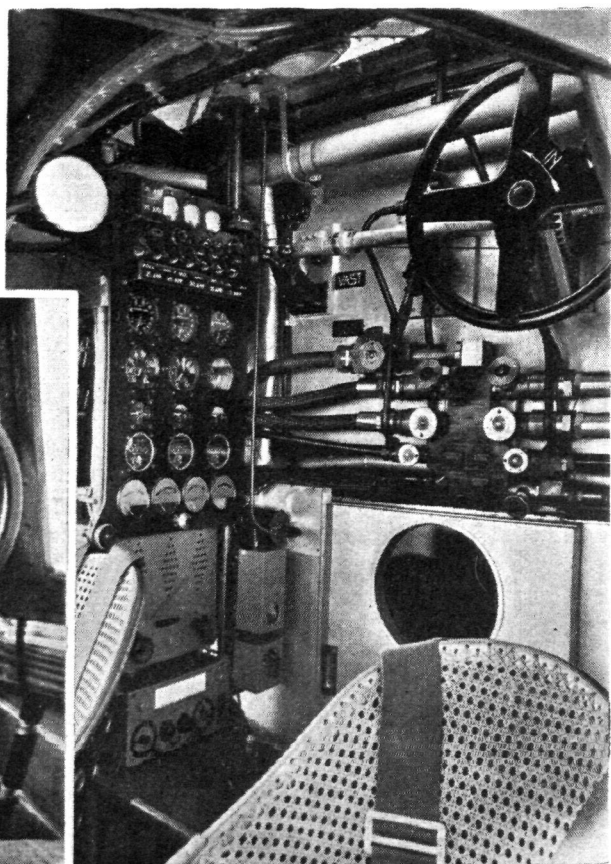
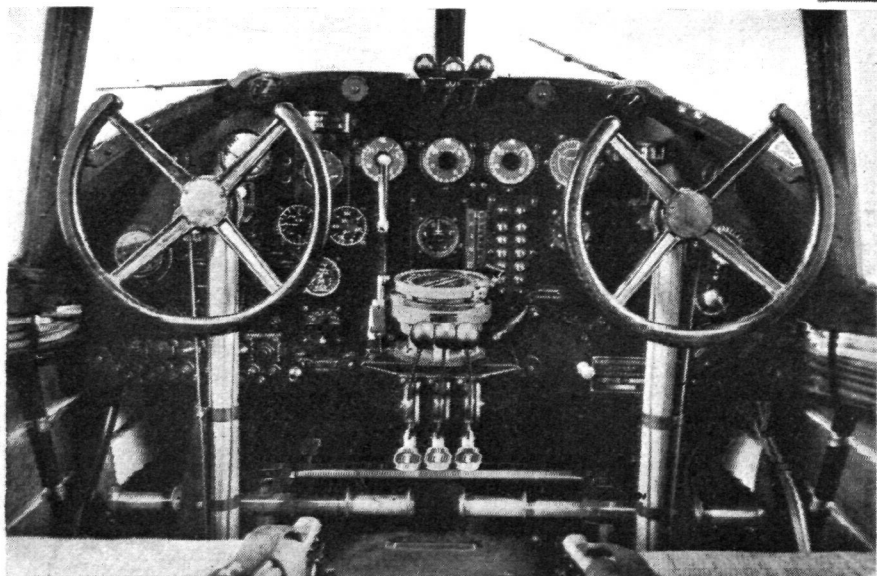
The Wright "Cyclone" engines are installed in the orthodox fashion, but the petrol tanks, which in previous Fokker machines have been placed above the cabin, are housed in the wing on each side of the fuselage, as the central part of the wing forms part of the cabin. The tanks are of welded aluminium, and each of the four has a capacity of 143 gallons, giving a total petrol capacity, when the tanks are completely filled, of 572 gallons, which is sufficient for a flight of about 1,000 miles. Although the petrol tanks are situated above the engines, direct gravity feed is not employed, the fuel being conveyed to the carburettors by engine-driven pumps. There is a hand pump for emergency, and also for use when starting up.

The pilot's cockpit is totally enclosed, but the side windows, which are large enough to serve as emergency exits, are of the sliding type. The seats for the two pilots are placed side by side, and are adjustable for angle of tilt as well as for position. The first pilot sits on the left, and has to the left of him the wheel for setting the camber gear flaps. Between the seats is a knob by means of which all electric leads are rendered "dead" in order to

ing speed is 154 m.p.h., the duration is less than 3 hr. The tankage is actually sufficient for approximately 1,000 miles, but in that case the pay load must, of course, be correspondingly reduced.

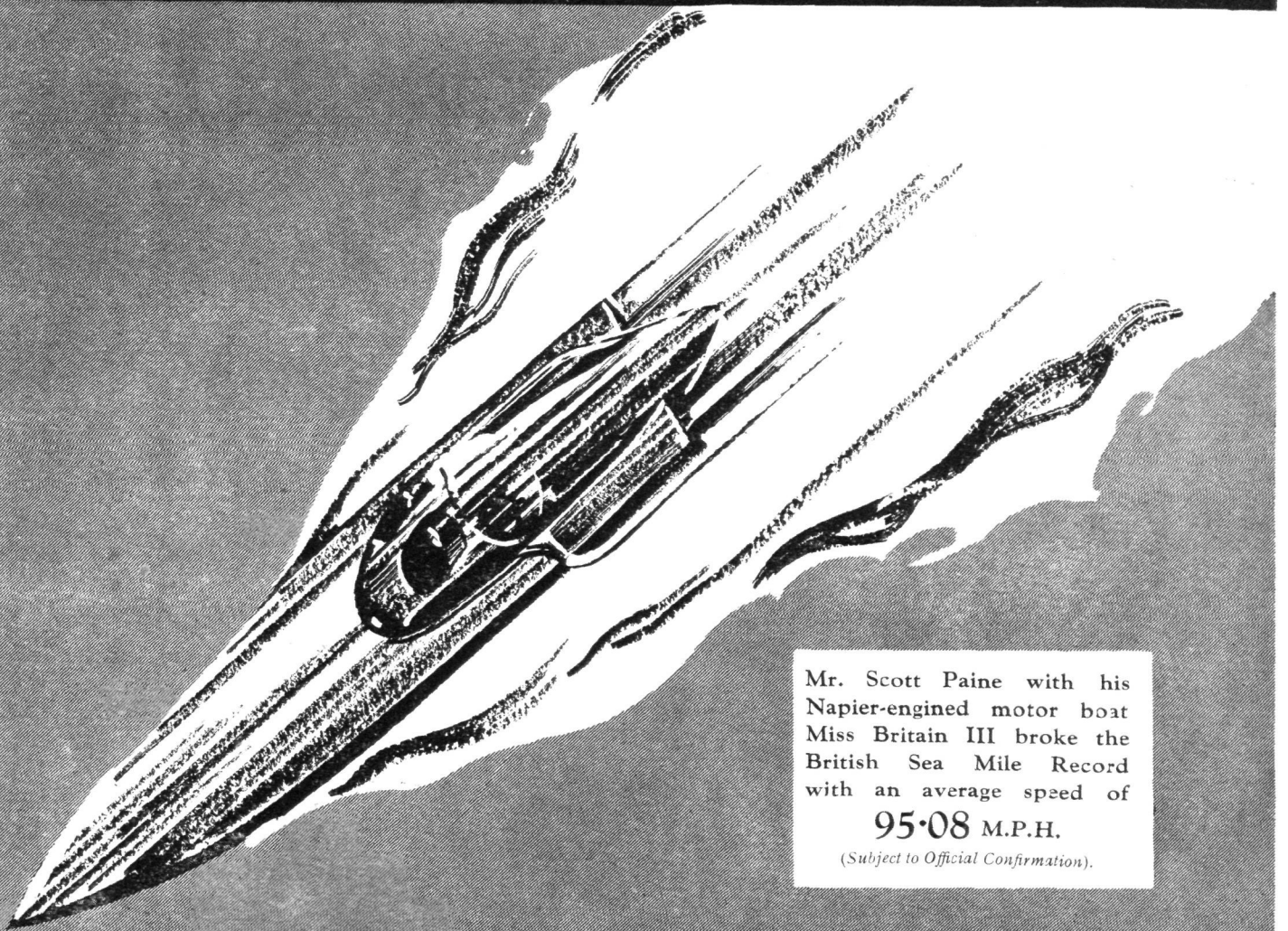
The general layout of the Fokker F.XX is well shown in the scale drawings and photographs. In the main it follows the well-known Fokker formula, and it is not until one sees the machine in flight with the undercarriages retracted into the wing engine nacelles that the new type obtrudes itself, although the rounded sides and bottom of the fuselage, as well as the N.A.C.A. engine cowlings, indicate careful cutting down of head resistance. If one examines the figures given in the table on the previous page, it is found that the power loading is 10 lb./h.p., and the wing loading 18.8 lb./sq. ft. With these loadings the maximum speed is very good at 186 m.p.h., giving a value of the Everling "High-speed Figure" of 23.53, which is exceptionally high for a three-engined aeroplane, and reflects the advantage of retracting the undercarriages. Wing camber flaps are fitted to the trailing edge between

**IN THE OFFICE:** Below, the dual controls and instrument board. On the right, the wireless compartment. The large wheel operates the undercarriage retracting gear.





# YET ANOTHER RECORD for NAPIER ENGINES



Mr. Scott Paine with his  
Napier-engined motor boat  
Miss Britain III broke the  
British Sea Mile Record  
with an average speed of

**95.08 M.P.H.**

*(Subject to Official Confirmation).*

# NAPIER

## ENGINES

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*Save time by using the Air Mail.*

# HIGHEST EVER

## World's Altitude Record broken on Castrol

On Sept. 28th, Mr. Lemoine piloting  
a Potez aeroplane fitted with a  
Gnome et Rhone engine, ascended  
to an altitude of 13,661 metres (44,819 ft.)  
*(Subject to Homologation)*

The World's FASTEST Speed (423 m.p.h.)  
The World's LONGEST Flight (5,600 miles)  
and now, The World's HIGHEST  
all achieved on

WAKEFIELD  
**Castrol**  
MOTOR OIL

The Product of an All-British Firm



**THE FOKKER F.XX:** The slender fuselage has been made possible by adding the wing root depth to the cabin for headroom. The Wright "Cyclone" engines are enclosed in N.A.C.A. cowlings.

minimise the risk of fire in a crash.

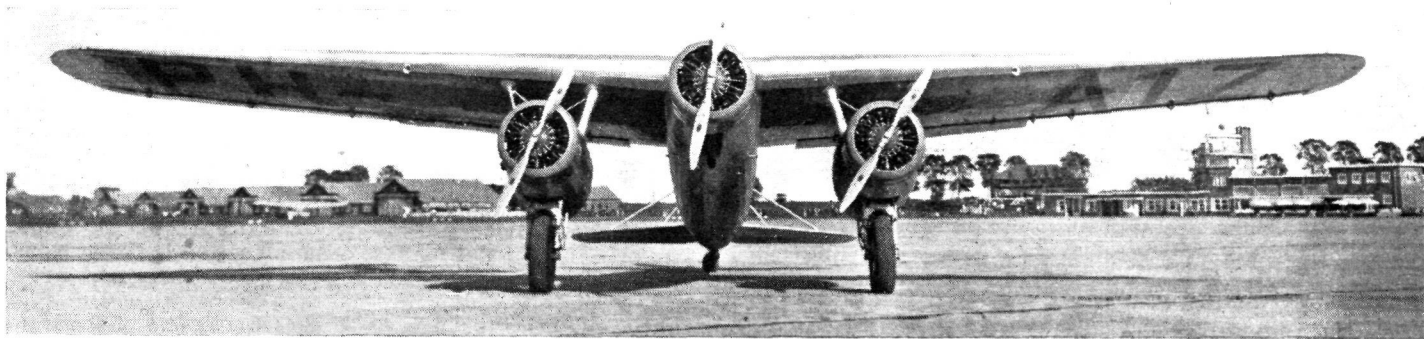
In the same compartment as the pilots', but between their seats and the front wall of the cabin, is the engineer's and wireless operator's post, which contains all the wireless equipment and the engine instruments, switches, etc., as well as the handwheel for raising and lowering the undercarriages.

A sliding door gives access to the cabin which, as already mentioned, has seating accommodation for 12 passengers, four in the bay between the wing spars, and eight aft of the rear spar. In the wing on each side of the fuselage is a luggage compartment, while aft of the lavatory at the back of the cabin is a large luggage hold.

The retractable undercarriages consist of forks formed by Messier telescopic legs, and of a steel tube framework for bracing the forks. The wheels can be locked in a number of intermediate positions between "fully up"



and "fully down." Aluminium fairings in front of the wheels were tried, their purpose being to close the opening in the engine nacelle when the wheel was up, but they were found to disturb the flow over the tail, and are not now used. Dunlop wheel brakes are fitted. The tail-wheel, which is fitted with a low-pressure tyre, is also retractable.



**LOW FRONTAL AREA:** The trailing edge flaps can be seen partly lowered.

## Air Mail Money Order Service

THE Postmaster-General announces that the Air Mail Money Order service has now been extended to Hong Kong. In addition to poundage at the ordinary rate for Imperial and Foreign Money Orders, a special Air Mail Money Order fee of 1s. 3d. is payable on each Order, irrespective of the amount. The Order must be taken out in time to allow the Money Order Department to advise particulars by the same Air Mail as that by which the remitter sends the Order to the payee.

## Air Passenger Fares in India

IMPERIAL AIRWAYS passenger fare charges in India are of interest by way of comparison with rail charges, writes *Indian Aviation*. From Calcutta to Allahabad, a distance in train miles of 512, and therefore less by air, the charge is Rs. 120 per passenger as compared with Rs. 48-1-6 by train. To Cawnpore, 630 train miles, Imperial Airways charge Rs. 160 and the railway Rs. 55-11-6. To Delhi, 902 train miles, the air fare is Rs. 210 and by train Rs. 74-13-6. (A rupee is 1s. 6d. at par.—ED.)

## New Punjab Air Service

WITH the opening of the Lahore aerodrome at the beginning of October, one of the first feeder services of the National Airways, Ltd., in Northern India will come within measurable distance. The question whether this service will operate along the Karachi, Multan, Lahore and Rawalpindi route or the alternate route from Jodhpur over Bikaner territory to Lahore and Rawalpindi has, however, not yet been settled. Meanwhile the Indian Trans-Continental Airways service from Karachi to Calcutta has been extended to Rangoon. The aerodrome at Akyab has been improved, a runway of 300 yards having been constructed which, it is hoped, will be extended within a short time. Akyab is fortunate in having this facility, considering the

fact that many projects for an all-weather route on the Karachi-Calcutta route have been held up for lack of funds. Money for the Akyab project, however, was provided long before the Trans-Continental scheme was approved of, owing to the fact that two big long-distance aerial services, the Dutch K.L.M. and the French Orient, were already calling at Akyab. Wireless, telegraph and direction-finding stations have also been established at Chittagong, Akyab, Sandowa, Bassein and Rangoon, and in view of the extension of the service to Singapore, at Victoria Point. From Karachi to Victoria Point these stations use 900 wavelength.

## Air Transport in America

INTERESTING news comes to us of conditions in America from a business man who is now visiting England. He says that passenger traffic has increased during this year so much that it is now impossible to get a seat on the Trans-Continental Express, except by booking 20 days ahead. So much, in fact, has the side of the traffic increased that the companies are making profits, quite apart from any mail contracts which they hold. He thinks that this is largely due to the increased comfort of aeroplanes like the new Boeing and Douglas machines. Both these are extremely quiet, and the cabins are said to register only 74 decibels as opposed to 76 in a Pullman railway carriage. He also praises the landing lights used on these types, which make floodlighting of the airport quite unnecessary.

## Air Service to the Balearic Isles

It is reported that an air service is to be started connecting up Barcelona, Palma, and Majorca. A twin-engined Dornier machine, presumably a flying boat, carrying eight or ten passengers, will be used. The service will be twice daily.

## AIR MAIL SERVICES

### Deputation from the London Chamber of Commerce to the Secretary of State for Air

**L**ORD LONDONDERRY, Secretary of State for Air, who was accompanied by Sir Ernest Bennett, M.P., the Assistant Postmaster-General, Sir Christopher Bullock, Secretary to the Air Ministry, Lt.-Col. Shelmerdine, Director of Civil Aviation, Mr. Reynolds, principal Private Secretary to the Secretary of State for Air, and Mr. Burkett, Directorate of Civil Aviation, received on September 28 a deputation from the London Chamber of Commerce led by the President, Lord Leverhulme. The other representatives of the London Chamber were Sir Geoffrey Clarke, Chairman of the Council of the Chamber, the Master of Sempill, Deputy Chairman of the Council, Capt. P. D. Acland, Chairman of the Chamber's Civil Aviation Section, and Mr. A. de V. Leigh, Secretary of the Chamber.

Lord Leverhulme, in introducing the deputation, recalled that it was 2½ years since Lord Amulree had received a similar deputation, and that the Chamber recognised that the troubles of the past few years had held up much of the development which business people would like to have seen in the Imperial air services, particularly in connection with the extension of the India route to Australia. The Chamber was keenly alive to the value of the air mail to the business community. The mail was the normal means of communication. Telegrams and cables were expensive and their use accordingly limited to cases where the greatest despatch was essential. The development of fast air mail services was therefore bound to be of the greatest importance to the commercial community.

It was appreciated that the figures published from time to time by the Post Office relating to the weight of mail carried on the Imperial Air Services showed a gradual increase. At the same time it would be admitted that at present only a very small percentage of the first-class mail went by air. This, it was felt, was due chiefly to the fact that the gain in time offered by the air mail over ordinary surface transport was not sufficiently great to make the air mail service attractive. The public had to be convinced that the aeroplane was a normal and not an abnormal means of transport.

It was realised that the speeding up of the air mail closely concerned both the Air Ministry and the Post Office, but on previous occasions the two aspects of the question had been discussed separately with the two Departments. They were very glad, therefore, that Lord Londonderry had invited the Assistant Postmaster-General to be present.

Sir Geoffrey Clarke said that one of the great difficulties in dealing with any question of air transport from the commercial point of view was the fact that the most important function of commercial aircraft, namely carriage of mails, was under the jurisdiction of the Post Office, whilst the subsidies were controlled by the Air Ministry. The result was that when the Chamber approached the Post Office for an improvement in the air service, it was referred to the Air Ministry, and when it asked the Ministry for an improvement in the mail services it was referred to the Post Office.

#### Value of Speed in Air Transport

The one real advantage of commercial air transport was speed, and therefore all its efforts must be directed towards the saving of time. In the case of the European services generally, there could be little advantage in time saving unless night flying were adopted. It was no use flying twelve hours and resting twelve hours, when trains and steamers ran continually for twenty-four hours. It rather reminded one of the fable of the Hare and the Tortoise. There was little use in having posting times at 7 and 8 o'clock in the morning, seeing that letters were all ready for despatch the previous evening. The commercial community, therefore, pressed most strongly for the general adoption of night flying. This it was recognised would not suit passengers, and, therefore, at any rate in the case of the important services, passengers and mails must be separated.

Sir Geoffrey then referred to the question of cruising speed, which he understood in the case of the Imperial Airways fleet was about 100 miles per hour on the India route. To meet modern requirements for mail services, very much higher cruising speed was necessary. Indeed, the Air Ministry must be impressed with the importance of fast air mail services, seeing that they had constructed a special air mail carrier which it was understood had

recently completed its tests. Moreover, it was believed that the Dutch had a similar machine under construction with a view to experimenting on a 3½ to 4 days' service between Amsterdam and Batavia. The Chamber urged the ultimate adoption of a twenty-four hour schedule and the use of aircraft with higher cruising speed for Empire air mail. This was advocated by the Chamber's last deputation to the Secretary of State for Air in March, 1931, when it was submitted that by this means Calcutta could be reached in 3½ days and Sydney and Wellington in 7½ and 8½ days respectively. Such an arrangement would also mean that Capetown could be reached in about half the present time, owing to the elimination of night stops. In any case it was considered that mails should travel at least 2,500 miles a day.

#### Subsidies

Sir Geoffrey referred to the fact that under the Air Transport (Subsidy Agreements) Act, 1930, the control of air subsidies was vested in the President of the Air Council, which meant that the Post Office was using an important service subsidised by another Department. There were obvious objections to this, as it led to the anomaly of the Post Office showing a profit out of a service which was really a heavy charge on the Exchequer. As the Post Office was earning a clear profit of ten millions a year, it could easily afford to pay a sufficient subsidy to any air service in order to enable it to pay its way.

#### Air Mail Fees

There were many services performed by the Post Office at a loss, such as the parcel post, the ½d. post and telegrams, but when any reduction was urged in air postage there was at once an outcry regarding the cost of the service and the heavy loss that would be involved.

The Post Office had always employed the fastest available services for the carriage of mails, without charging extra postage. The Chamber recognised that in the present state of air services it was only fair to charge the public something additional for fast communication by this means, but the total amount should be a postal rate, and not a telegraphic rate, and the present air postal rates could not be regarded as fair or likely to develop the use of the air mail services. In fact, the rates were deterrent.

The whole basis of postal rates was a suitable initial charge with a very much lower charge for each additional unit of weight. In this connection Sir Geoffrey compared the air rate to India, namely 6d. for a ½ oz. letter and 5d. for every additional ½ oz. with the inland rate of 1½d. for 2 oz., and ½d. for every additional 2 oz. The proposed rate for the Australian service was 1s. 3d. per ½ oz. without any reduction for additional units, so that air postal rates were fixed on an entirely different basis from what had usually been regarded as suitable for postal rates. The charges were too high, and when any reduction was asked for almost exactly the same arguments were put forward as were used by the Post Office in 1840 when Rowland Hill proposed the introduction of the penny post. Whilst appreciating that these were purely postal matters and could hardly be dealt with by the Air Ministry, Sir Geoffrey suggested very tentatively the adoption of a flat rate for all Empire air mails of about 4d. for the first unit and 2d. for each additional unit. If these were introduced, he felt sure there would be an enormous increase in the air mail.

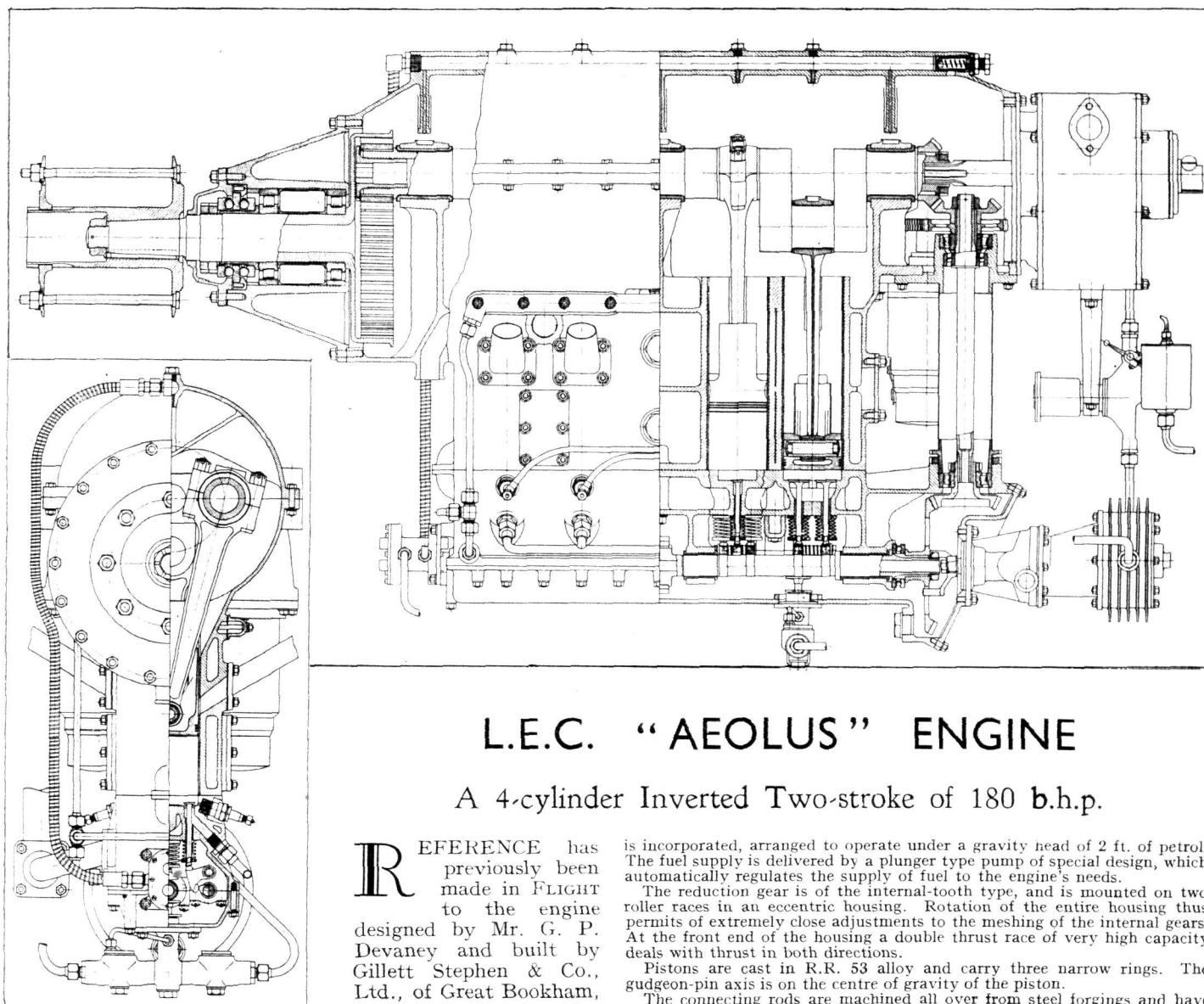
#### Inquiry Suggested

The Chamber felt, however, that the whole question of subsidies and their incidence should be carefully examined in the light of recent experience and the great extension of air services. It fully recognised the splendid work done by Imperial Airways, but in view of the piecemeal development of air services and the very large amounts expended from the public purse, it was urged that the time had come for a full inquiry by an impartial tribunal before which evidence could be given. Until such tribunal had made its recommendations, no further commitments should be entered into. Such an inquiry should include such matters as the extension of the air services, air fees and subsidies.

The Master of Sempill also emphasised the importance of night flying and the need for the use of higher speed machines, and inquired what was to be the ultimate use of the high speed mail machine which the Air Ministry had had constructed.

(Concluded on page 1014)





## L.E.C. "AEOLUS" ENGINE

A 4-cylinder Inverted Two-stroke of 180 b.h.p.

**R**EFERENCE has previously been made in FLIGHT to the engine designed by Mr. G. P. Devaney and built by Gillett Stephen & Co., Ltd., of Great Bookham, Surrey, for the Low Engineering Co., Ltd., the

firm which has undertaken the production and marketing of the engine. The engine is of the four-cylinder, inverted type, is a water-cooled, two-stroke, and is designed to develop 180 b.h.p. It is fitted with 3 to 1 reduction gearing for the airscrew. As will be clear from the following description, the "Aeolus" engine, as the new type has been called, is chiefly remarkable for the fact that it is provided with valves for admitting separately plain air and a rich fuel mixture. The air valves are arranged to work every other stroke only, so that they are what may be termed half-time valves. The object of admitting pure air first, and then a rich fuel mixture is, of course, to avoid waste of fuel by blowing it out through the exhaust ports. A remarkably low fuel consumption is claimed for the engine.

The cylinders are bored out to 68 mm. and are formed in a monobloc casting of magnesium alloy, the actual wearing surfaces being dry, austenitic liners pressed in with an interference fit. This material obviates difficulties experienced when using liners of a different material to that of which the cylinder block is composed, as the coefficient of expansion of the liner closely approximates to that of the magnesium alloy of the cylinder block. Combined with the cylinder block is the top half of the crank case. This form of construction has been chosen, in spite of its weight, because of the extreme rigidity which it gives. The top crank case cover is also cast in magnesium and incorporates the oil distribution gallery in its construction. The reduction gear housing comprises a conical casting bolted to the front end of the engine by 18 high-tensile steel studs. The thrust of the propeller is taken in the forward direction by a sturdy forging which incorporates an oil thrower ring.

The rear end of the crank case is closed by the first stage air compressor, built in this country under "Zoller" patents.

The cylinder head is detachable and is of extremely stiff box-section construction. It carries the two camshafts which operate the three vertical poppet valves per cylinder. The main camshaft is driven by a vertical shaft and bevel gears from the rear end of the crankshaft. The size of these gears is exceptional, which should result in long life and quiet running. The splining which carries these gear wheels is so arranged as to permit vernier adjustment of the valve timing.

At the rear end, the camshaft drives the centrifugal type water pump and second stage compressor in tandem. At the front end it drives a double-gear type oil pump, one of which feeds oil to the engine, the other being the scavenging pump returning to the tank.

In the present engine a small twin float chamber "Bowden" carburettor

is incorporated, arranged to operate under a gravity head of 2 ft. of petrol. The fuel supply is delivered by a plunger type pump of special design, which automatically regulates the supply of fuel to the engine's needs.

The reduction gear is of the internal-tooth type, and is mounted on two roller races in an eccentric housing. Rotation of the entire housing thus permits of extremely close adjustments to the meshing of the internal gears. At the front end of the housing a double thrust race of very high capacity deals with thrust in both directions.

Pistons are cast in R.R. 53 alloy and carry three narrow rings. The gudgeon-pin axis is on the centre of gravity of the piston.

The connecting rods are machined all over from steel forgings and have the white-metal linings for the big ends cast direct into the ends of the rods. The little end is provided with a gunmetal bush, the gudgeon-pin being fully floating in both little end and piston bosses, being provided with brass ends pressed in.

The crankshaft is a steel forging in V.N.C.A., the material used for the shafts of the Schneider Trophy engines. It is drilled through both mains and big ends, and carries the bevel timing gear wheel at the rear end. At the front end it carries the internal-reduction gear wheel on splines. The shaft is mounted in three main bearings consisting of white metal-lined steel shells. The main bearing caps are of steel and are each held by two half-inch high tensile steel bolts which are provided with split-pinned nuts at both ends.

Ignition is by means of two Scintilla "Vertex" high tension magnetos, incorporating automatic advance and retard mechanism. The two 12-mm. "Lodge" plugs per cylinder are mounted on opposite sides of the combustion chamber, where they are extremely accessible. Steel bushes are screwed into the alloy head to receive the sparking plugs.

The valve gear consists of two "underhead" camshafts. The main one, lying on the centre line of the cylinder head, is driven by bevel gearing from the rear end at half-engine speed. This operates the air valves only, through the medium of cam followers pivoted on steel follower shafts and positioned by small coil springs encircling the shafts. Tappet adjustment of these valves is provided by pushing aside the follower, extracting the hardened steel thimble from the end of the valve stem, and adding or subtracting to the number of steel discs which these thimbles house. These two valves are positioned in a common port fed from the first stage air compressor with pure air. They operate alternately, so reducing the number of operations per minute.

The fuel camshaft is driven from the centre of the air valve camshaft at engine speed by spur gearing. It operates small poppet valves through rocking levers, the tappet adjustment being the same as described for the air valves. These fuel valves admit to the cylinders a rich mixture of fuel and air from the second stage compressor. This arrangement of separate fuel injection is incorporated to prevent fuel waste through the exhaust ports.

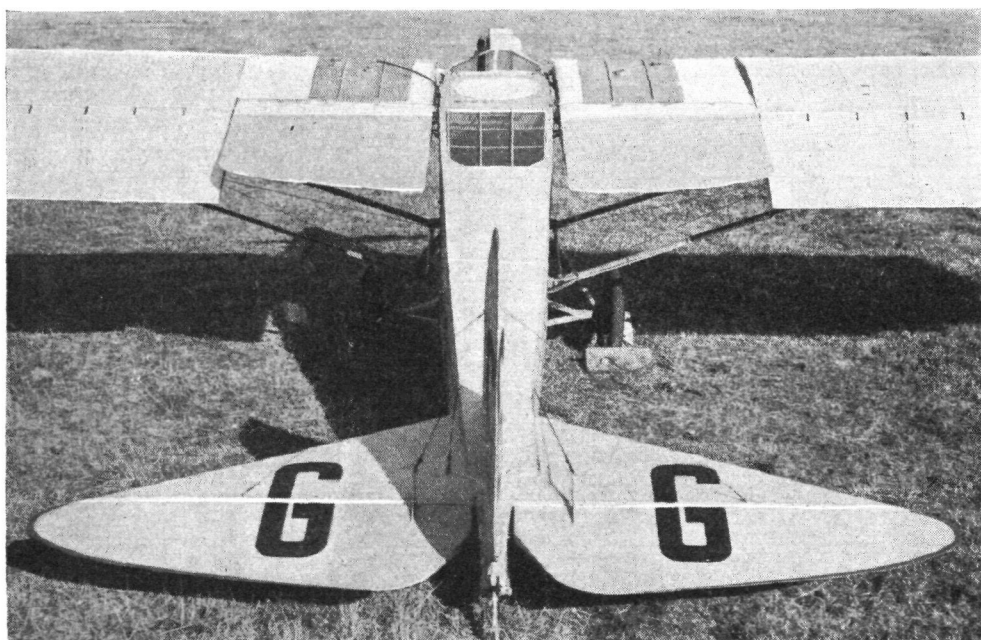
The second stage compressor is fed through the carburettor from the first stage compressor, the comparative pressures at maximum engine speeds being approximately 14 lbs. to the square inch and 25 lbs. to the square inch.

There are two exhaust ports per cylinder, discharging into a manifold on each side of the engine. It is the intention of the builders to turn out these engines as standard fitted with efficient silencers.

The designed maximum speed of the engine is 4,500 r.p.m., at which speed 180 brake horse-power is developed. This gives a propeller speed, with the three-to-one gear reduction incorporated, of 1,500 r.p.m. As yet, no details of fuel consumption figures are available for publication, but it is anticipated that they will be slightly less than 0.4 lb. per brake horse-power per hour. It is estimated that the all-up dry weight of the engine, including airscrew hub, will be 200 lb. Including radiator and water, this figure will be increased by approximately 35 lb.

It is interesting to note that all the plain white metal-lined bearings in this engine have been designed to incorporate the "Michell" system of lubrication, which is well known in the marine engine world.

## THE UGO ANTONI WING



**THE STABILISERS :** Near the wing roots the trailing edge is reflexed and flexible, and serves to give longitudinal stability. On the right, Mr. Ugo Antoni, the designer of the variable camber wing. (FLIGHT Photos.)

**A**MONG the many problems which face the aircraft designer, few are more important than speed range. A high operational speed is necessary if the aeroplane is to compete successfully with ground transport, and one way in which cruising speed can be raised is by cutting down wing area. Practical considerations soon place a limit on the degree to which wing loading, and consequently landing speed, can be increased. From several points of view a high wing loading is an advantage, and the problem then becomes one of finding means of raising the unit lift of the wing. One way of doing this is by using a hinged trailing-edge flap arranged so that it can be raised and lowered by the pilot. This system has been used by the Fairey Aviation Co. for many years with good results. Another way is to delay the breaking away from the wing of the air flowing over it until a larger angle has been reached. This is the object of the Handley Page lift slot. More recently researches have been carried out in the United States on "split" trailing-edge flaps, in which the upper half remains in line with the wing contour, while the lower half is hinged downwards.

All these methods have advantages and disadvantages, but as the aerodynamic refinement of aeroplanes is increased, the need for devices which will not only increase the lift but also the drag, in order to provide a steeper gliding angle, becomes more urgent, and it is likely that in the near future aircraft with variable wings of some form or other will become a good deal more common than they are at present.

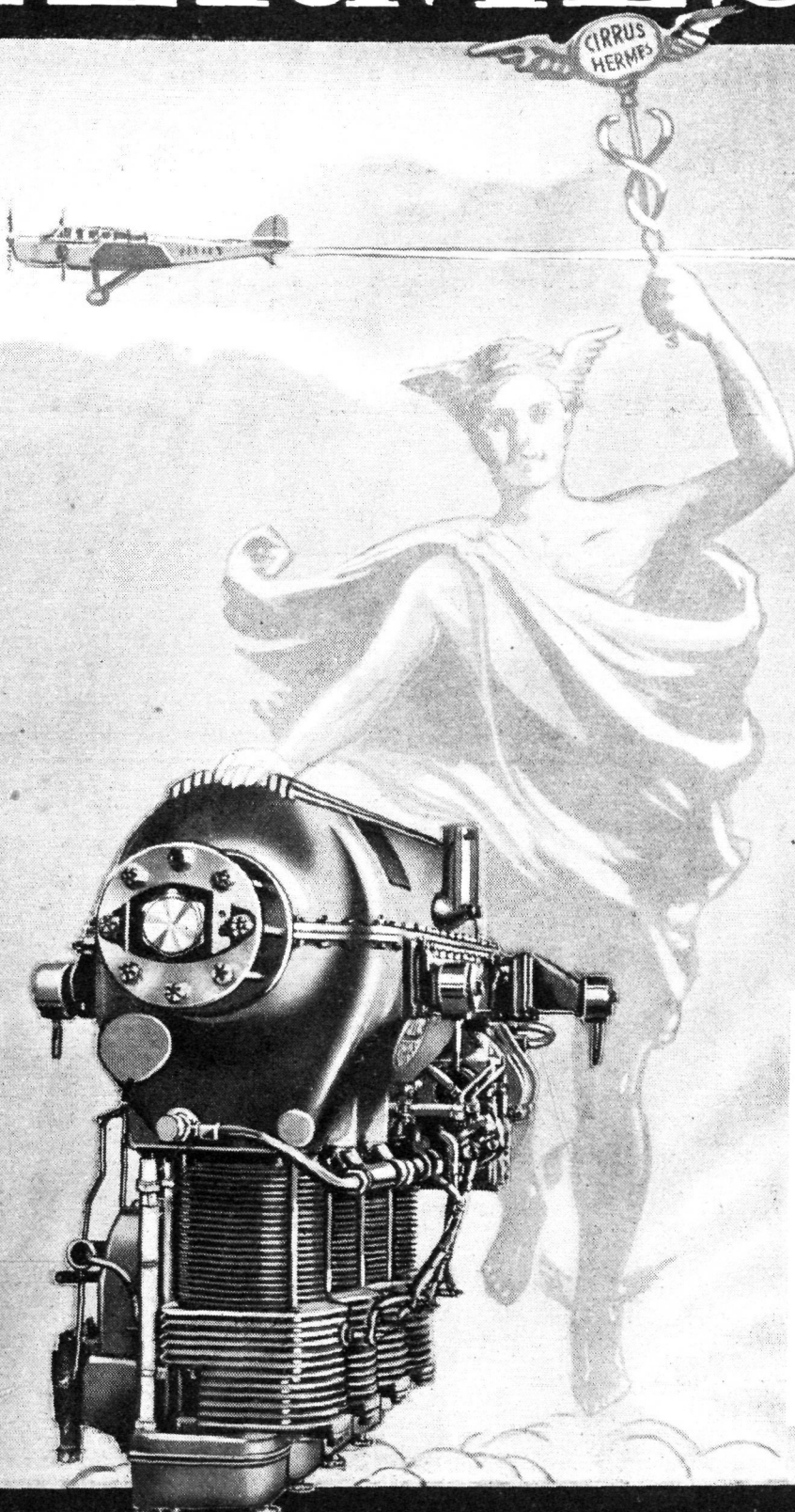
As long ago as May, 27, 1932, we described and illustrated in FLIGHT a variable camber wing patented by the Italian engineer, Ugo Antoni. After failing to get the necessary support in Italy, Mr. Antoni came to England, where he has succeeded in obtaining financial assistance to continue the work which he started in Italy in 1907. He and his friends have established a company under the title Ugo Antoni Safety Aircraft, Ltd., with offices at 17, Thavis Inn, Holborn Circus. The Gloster Aircraft Co., Ltd., was, as mentioned in our article last year, entrusted with the construction of the first Ugo Antoni variable camber wing in this country, and as we recorded in FLIGHT a couple of weeks ago, the machine made its first test



**IN THE TWO EXTREME POSITIONS :** On the left, the wing is shown flat, while on the right it is shown in maximum camber position.



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Round Poland Flight  
1933

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R.W.D.5  
(Pilot M. Pronasko)

**2nd HERMES IIB**  
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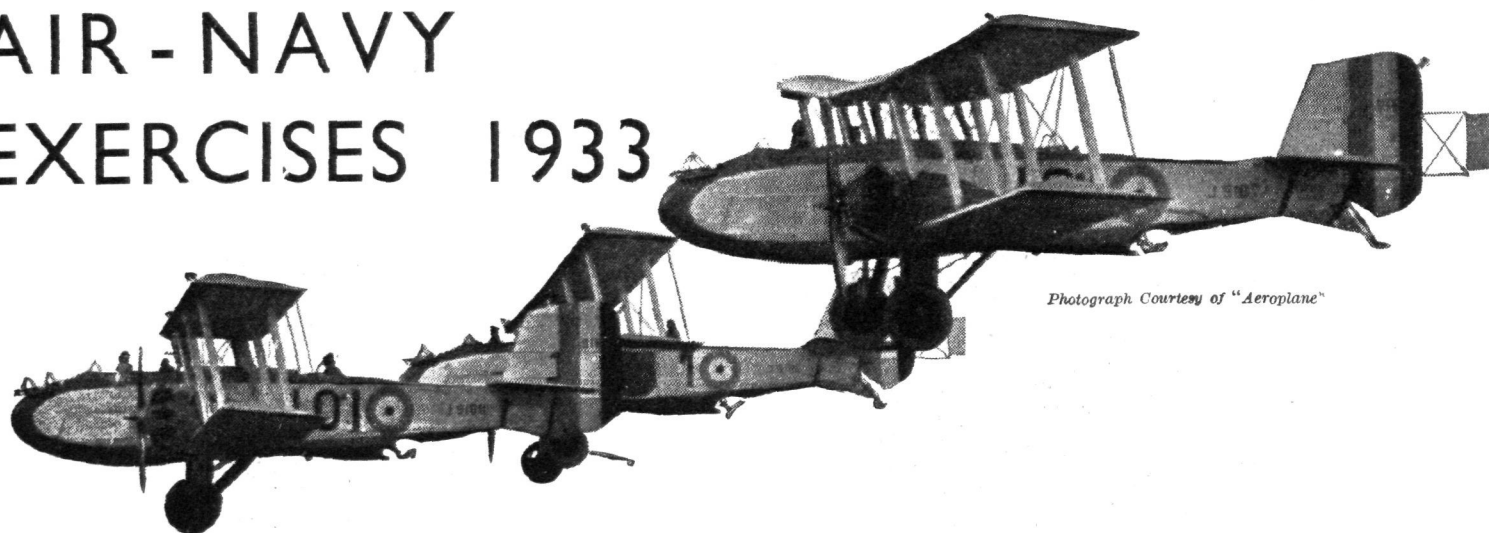
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## AIR - NAVY EXERCISES 1933



*Photograph Courtesy of "Aeroplane"*

### SOME PRESS COMMENTS on the performance of the BOULTON-PAUL "SIDESTRANDS"

*The Times, 25.9.33.*

"Then the twin-engined Sidestrands of No. 101 Squadron were detached to deal exclusively with the aircraft carriers . . . . . Within 54 minutes of their take-off they were dropping bombs on the big ships some 70 miles away."

*The Daily Telegraph, 25.9.33.*

"The twin-engined bomber affords a very steady platform and a very high percentage of hits is obtained even from greater heights . . . . . Coming in to land was celebrated by an amazing performance of stunt flying. The Sidestrand, notwithstanding she is big, has almost the nimbleness of a scout."

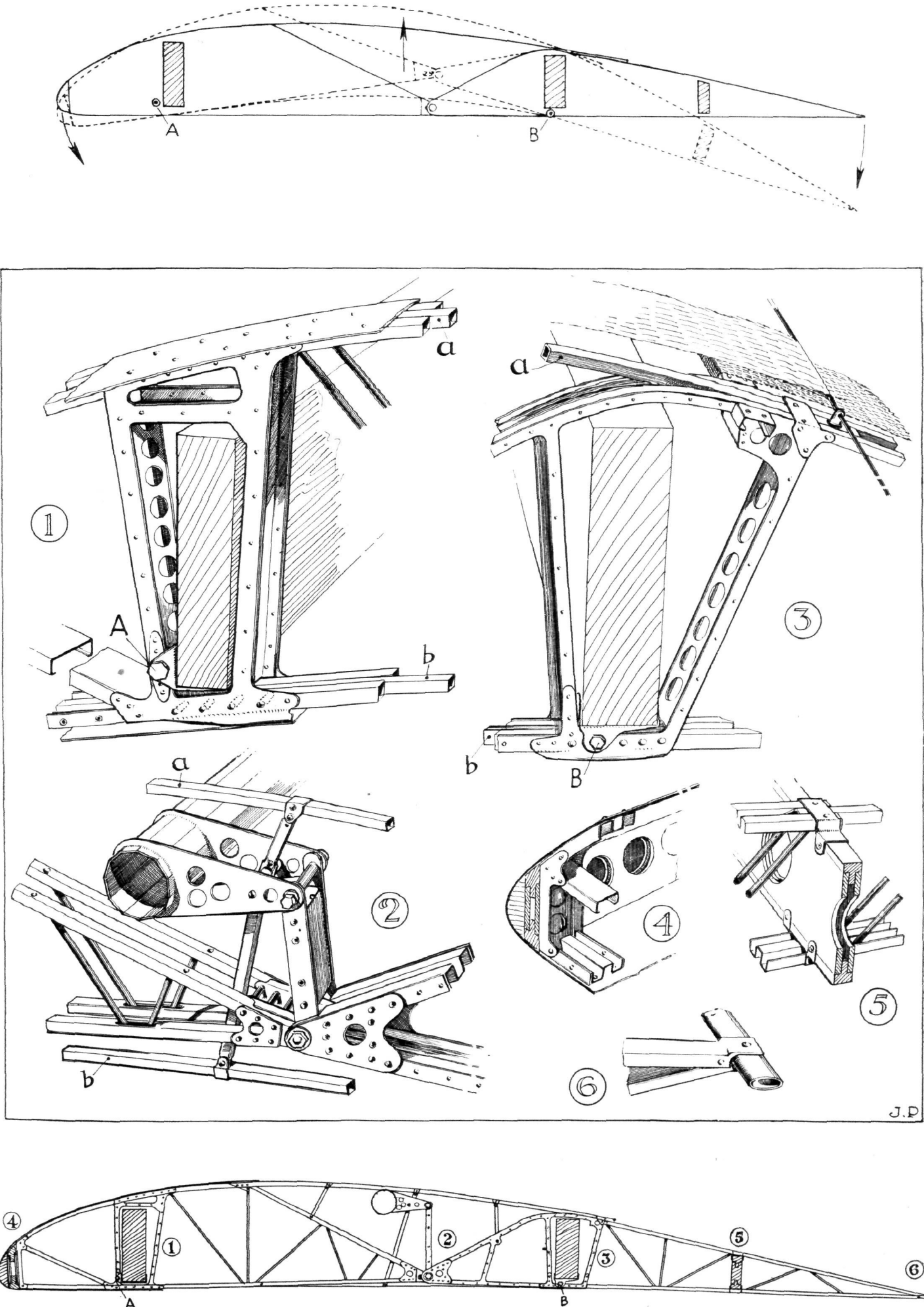
*The Morning Post, 25.9.33.*

"One of the most successful air attacks was launched by No. 101 Squadron against the Red Fleet's capital ships Renown, Malaya and Warspite . . . . . the twin-engined Boulton & Paul Sidestrands, the only Blue Force machines, according to some views, capable of carrying bombs sufficiently heavy to damage a capital ship—set out, located their objectives from a height of about 9,000 feet, and swooped to attack in line ahead, each machine dropping his theoretical bombs as it passed."

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THE ANTONI VARIABLE CAMBER SYSTEM : The upper and lower diagrams indicate the action of the wing, while the numbered sketches show the structural details at various points. (FLIGHT Copyright Sketches.)



ON TEST AT BROCKWORTH AERODROME: The Breda monoplane on which the Antoni variable camber wing has been mounted. (FLIGHT Photo.)

flights recently. With the exception that the existing rudder on the Breda monoplane on which the new wing has been mounted was found to be rather inadequate, the test flights were very successful, and a larger rudder has now been built and the flights are to be continued.

The external appearance of the Ugo Antoni variable camber wing, as mounted on the Breda monoplane, is shown in our photographs, and most of the relevant details are illustrated by sketches. It will be seen that the camber mechanism does not extend over the entire wing span. At the tips the wing is of normal construction to allow of the use of the usual horn-balanced aileron. At the root there is also a fixed wing portion, but this has an upturned flexible trailing edge, the purpose of which is to give fore-and-aft stability. Between fixed and movable wing portions baffle plates are fitted in order to reduce the "spilling" of air over the ends of the movable wing when the camber is set at its maximum.

The general principle of the camber gear is indicated by the diagrams at top and bottom of the previous page. The lower rib flanges are hinged to the bottom of the main spars, and cranks extend towards the centre of the wing chord, where they are joined together and to ties operated by cranks on the torque tube which operates the camber gear. The mechanism has a toggle action, and it will be seen that the toggle arm of the trailing edge portion is shorter than that of the leading edge. This results in a greater angular movement of the trailing than of the leading edge.

The mechanical details of the camber gear are well shown in the sketches on the previous page. The ribs are of metal construction, while the main spars are of wood. The

arrangement of the wing fabric has called for a good deal of thought, as it will be obvious that the covering on top of the wing must contract and expand as the camber is altered. The lower surface changes as much in camber as the top, but does not contract and expand to anything like the same extent, and the amount of contraction and expansion is taken care of by the small offset at A on the front spar.

The arrangement of the fabric on the upper surface is ingenious. The main wing top fabric extends from the leading edge to just behind the rear spar, where it is attached to a wire running parallel with the spar. The top fabric covering of the trailing edge passes under the wire, and is attached to and moves with the trailing edge lower rib flange. The overlap of the two pieces of fabric is such that even at maximum camber no opening is left which might interfere with the airflow.

In this first variable camber wing the designer has had to play for safety, and the result is that the wing is, perhaps, a little heavier than it need be. Thorough test flights will be made to decide this and other points, and there is little doubt that, in the next wing, detail structural improvements could be made. In the meantime, a wing has been produced which should serve to settle fairly definitely to what extent the variable camber wing is worth while, and if the advantages claimed by the designer are found to be realised or realisable, an excellent foundation has been laid upon which to base future development work.

The fact that the wing has been built by the Gloster Company is sufficient guarantee that the workmanship is of a high order.



## For Australian Survey

THE two "Dragons" (two "Gipsy Majors") ordered by the Western Mining Corporation, through H. Hemming & Partners, for survey work in Western Australia, were named and wished good luck, besides also being "bathed" in champagne, by Mrs. W. S. Robinson, wife of a Director of the Corporation, on Tuesday, October 3, at Stag Lane

Aerodrome. The "Dragons" carry Williamson "Eagle 4" aircraft cameras, Marconi wireless telephony and telegraphy sets, Reid & Sigrist Turn and Bank Indicators, Sperry Directional Gyros, and Badin Statoscopes, also the usual range of navigational and engine instruments supplied by Smiths Aircraft Instruments. The enterprise was referred to in FLIGHT for August 31.



THE GOLD SEEKERS: The two D.H. "Dragons" which, as referred to above, will be used by the Western Mining Corporation for survey work in Western Australia. (FLIGHT Photo.)



# From the Clubs

## TWO FRENCH MEETINGS

### The Bienvenue Aerienne Visit

**T**O reciprocate the generous hospitality and many courtesies that they had received during flights to neighbouring countries and having especially in mind their last year's visit to England, a group of French Air Tourists, organised under the name of "The Bienvenue Aerienne" (Aerial Welcome), recently sent invitations to their confrères in various foreign clubs to make a return visit to France as their guests. The Bienvenue Aerienne Group, which is composed of members of the Touring Club of France and of the Roland Garros Section of the Aero Club, enlisted the support of both of these major organisations and also had the aid of several other aero clubs throughout France in receiving the foreign airmen. The week of September 17-24 was named as the period of the visit, and an attractive programme arranged, with the City of Rheims as an assembly point. In response to this invitation some forty foreign planes, together with their French hosts, were guests of the Aero Club of that City on Sunday, September 17, last. Included in this list were 23 English, 9 Belgian, 3 Dutch, 2 Polish, 2 German, 1 Swedish and 1 Swiss machine. A luncheon and a dinner were given in their honour and the famous champagne caves explored.

The planes then took off for Orly the following afternoon (Monday), where they arrived about 5 o'clock, having been somewhat delayed by the foggy weather. On their arrival a tea was given in their honour in one of the large hangars of the airport, at which Miss Susanne Deutsch de la Meurthe, President of the Roland Garros Section of the Aero Club of France, presided, at the conclusion of which the airmen repaired to the adjoining club house and signed the visitors' golden book.

After passing Monday night at the Hotel George V in Paris the airmen took off the next morning for the nearby airport of Buc, where they were the guests at a luncheon given by the Touring Club of France, served in the club house of the Blériot Aviation School there. Mr. Edmond Chaix, the President, presided, assisted by Dr. Behague, the Chairman of the Aviation Committee of the Touring Club. Those seated at the guests' table included Miss Susanne Deutsch de la Meurthe, Mr. Lindsay Everard (Great Britain), Count d'Ursel (Belgium), Col. Davee representing Mr. Pierre Cot, the Air Minister, Commandant Louis Hirschauer, the Chief of the Tourist Aviation Section of the Air Ministry, Louis Blériot, the constructor, and Messrs. Simonsson Folke (Sweden), von Hoepfner (Germany), Skorzewski (Poland), Guedet (Switzerland), and Roger Seligman (France) of the Bienvenue Group.

After the luncheon an aerial golf game took place, which was so arranged that all the visitors obtained handsome souvenirs of the occasion.

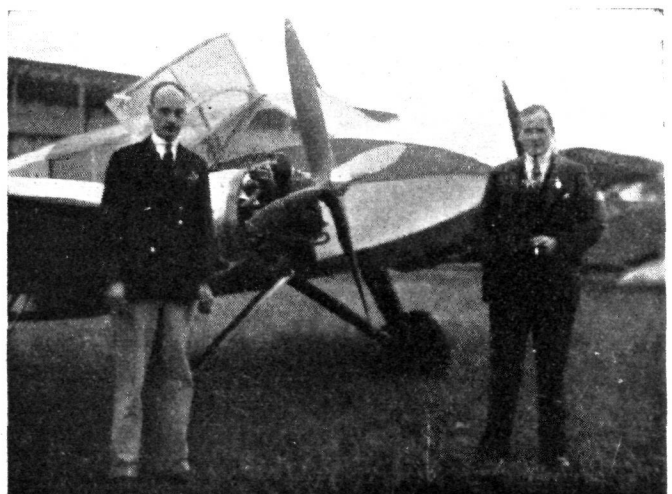


Above is Guy Hansez (Belgium) and his "Fox Moth," and, below, Mr. Lindsay Everard's D.H. "Dragon."

Among the visiting airmen making the flight to Orly and Buc were:—

*English.*—Air Vice-Marshal Borton and Miss Hern (Percival "Gull"); Mr. and Mrs. Nigel Norman ("Puss Moth"); H. Gordon Selfridge Jnr. and Miss von Treschow ("Leopard Moth"); Mr. and Mrs. Christopher Clarkson (Percival "Gull"); Graham Mackinnon and George Reynolds ("Monospar"); Mr. Lindsay Everard and Lt. Phillips, Wilson Fox and Jay Haydock ("Dragon"); Miss Sale Barker and Mr. Payn (D.H. "Moth"); Mr. and Mrs. Ivor McClure (D.H. "Moth"); John Shand and Miss Wegenast ("Puss Moth"); A. Norman and Miss R. Norman ("Gipsy Moth"); J. Crammond and Mrs. Crammond ("Klemm"); S. P. Symington (Comper "Swift"); Mrs. S. Davenport and Miss Moses ("Puss Moth"); H. C. D. Hayter and Capt. Aste ("Puss Moth"); A. Gibbons ("Klemm"); H. Mellor and passenger ("Puss Moth"); G. Niven and Mrs. Butler ("Leopard Moth").

*Belgian.*—Guy Hansez, Mrs. Hansez and Mrs. Stamps ("Fox Moth"); G. Hanet ("Puss Moth"); J. de Keyn



SOME BRITISH VISITORS AT BUC: (Left) Mr. Gordon Selfridge Jnr. and Miss Von Treschow and their "Leopard Moth." (Right) Mr. Graham Mackinnon (right) with his pilot, George Reynolds (left) and Monospar.



**MORE BRITONS AT BUC:** From left to right, Mr. and Mrs. Christopher Clarkson, Rex Hayter, C. S. Napier, and Miss Molly Olney—and a Percival "Gull."

and Contat de Peruzzi (D.H. "Moth"); M. Fester and G. Vertongen (D.H. "Moth"); Count d'Ursel and Jacques Maus (St. Hubert); J. L. Mathieu and G. de Fevrimont ("Gipsy Moth"); P. Osterrieth and M. Collon (St. Hubert Cirrus); J. E. Ledure and Mrs. Ledure ("Puss Moth"); Joseph Dupont and J. Pestiaux (Bulte Sport).

*Polish.*—Pronaszko and Polturak (R.W.D. 5); Skorzewski and Mrs. Skorzewski (D.H. "Moth").

*Dutch.*—Van Romunde (Pander); Le Jonkheer, Wan Hoagland and de Geus (Pander).

*German.*—Von Hoepfner and Siebel ("Klemm"); Schien and Stadler (D.H. "Moth").

*Swedish.*—Simonsson Folke and Miss Inga Ahlstrom (D.H. "Moth").

After the luncheon and the aerial golf game at Buc the tourists flew to the adjoining newly-constructed aerodrome at Toussous le Noble (known as Toussous-Paris), where they were the guests at a tea given by the Aero Club of Paris. They then returned to Orly, and after leaving their machines passed the night again at the Hotel George V in Paris. The next morning (Wednesday) the visitors flew to Lyons, where a luncheon was tendered them at the Airport, after which they took off for Cannes. Thursday and Friday were passed in this latter city, a number of entertainments being given in their honour. On Saturday the air tourists attended the exercises at San Raphael held in honour of the twentieth anniversary of the flight of Roland Garros across the Mediterranean, and on Sunday the tour came to an end and they took off for home. After the luncheon an aerial golf game took place.

R. C. W.

A representative contingent of British private owners drifted back from the French "Bienvenue Aérienne" in ones and twos last week. Of those who went on to Cannes to partake of the "distractions diverses," at which the programme hinted so alluringly, the first home was Flt. Lt. Christopher Clarkson. Mr. Jack Shand, owing to a touch of ptomaine poisoning, came back by train from Lyons, leaving behind him a vague request that someone should be found to fly his "Puss Moth" home again. Arrived in England, he found an enthusiastic volunteer in Mr. "Biffy" Newman, but no sooner had the latter started off by Imperial Airways than Mr. and Mrs. Constant, clearing Customs inwards from Paris, remarked with surprise that the machine was at Le Bourget in the capable hands of Mr. Edward Bret, who had been put on to the job in France. Telephones rang, and Mr. Newman was instructed to pick up the "Puss" at Le Bourget. A few minutes later it arrived at Heston with Mr. Bret, and a last hurried telephone call failed to recall Mr. Newman, who is now—it is conjectured—entangled in more distractions diverses, in Paris.

## French Aero Club Federation Convention

**T**HE Fourth Annual Convention of the Federation Nationale Aeronautique was held at Clermont Ferrand on Friday and Saturday, September 1-2. Ninety-three clubs were represented. During the three days preceding the Convention the Aero Club of Auvergne held their Annual Rally to encourage delegates to attend by air. Pilots taking part in the Rally were

allowed to start at any time after August 29 and to make as many intermediate landings as they desired provided they arrived at the Aulnat Aerodrome between 3.30 p.m. and 5 p.m. on Thursday, August 31. The only condition imposed was that all landings must be made at accredited airports and certified by a responsible official: the total distance credited to each pilot being the sum of those between each landing. The final results of the Rally were obtained by multiplying the total distance flown by the coefficients representing the efficiency of the engines and the number of passengers carried. The age of the pilots and whether they were professional, military, or amateur, were taken into account, and an allowance was made for amphibian machines and the carrying of parachutes. *Le Petit Parisien* presented cash prizes, amounting to 6,000 francs, to the five leading planes, and the Count de Montigny a cup to the first amateur pilot home. There was also a cup presented by the Joseph de Thee family to be awarded to the pilot who had flown the longest distance to the Convention, and who was also a member of a club affiliated to the Federation of the French Aero Clubs. The winner of the Rally, to whom also was presented the Montigny Cup, was M. Pierre Celerier of Bordeaux, who covered 1,850 miles, accompanied by his wife and nine-year-old son. He was flying a Potez 43 cabin monoplane, and traversed Belgium and Germany as well as France.

The Convention itself was opened at 9 a.m. on the Friday, September 1, the first session being presided over by M. Marcel Marcombes, a former Cabinet Minister and now Member of the Chamber of Deputies for the Clermont Ferrand District. M. Henry Chollat, the General Secretary of the Federation, in presenting his report, said he must thank the various public officials for the aid that they had rendered during the past year. He emphasised the growth of the provincial aero clubs throughout the country; there were now 700 tourist planes in France, which shows an increase of over 300 since 1932, and 546 licences were issued last year. A general information centre had been established in conjunction with the Touring Club of France, where complete information could be obtained regarding planes and landing grounds in the country. Reduced rates of insurance had been fixed and a policy of 100,000 francs could now be obtained for about 3 francs by passengers making a flight. The number of landing grounds opened during the year was 24. A League of Aero Clubs had been formed in the French Colonies. The National Aviation Day yielded some 645,000 francs, a considerable portion of which sum had been set aside for relief work among disabled pilots and their families.

M. George Massinet, the Managing Director of the "Avia



The Wien glider of M. Henry Lumiere, President of the Aero Club of Rhone and South West.



Gliding Club," also made an interesting report. There were, he said, about 250 gliding clubs in France. A National Gliding Centre had been created at the Banne d'Ordananche, where the sharp grades of the hills and valleys created currents ideal for gliding. It was from this ground that Capt. Joseph Thoret glided for 4 hr. 45 min. and Alfred Auger for 3 hr. 30 min.; a permanent camp had been established there, comprising three houses, two hangars and a scientific laboratory.

M. Pierre Cot, the Air Minister, arrived at the Aulnat Aerodrome from Paris in his plane about noon on Saturday; a lunch was given in his honour at the aerodrome, after which the Minister inspected the various machines that had participated in the Rally.

On the Saturday afternoon the Convention came to an end with the holding of a General Assembly presided over by M. Laurent-Eynac, the Minister of Posts.

On the next day, Sunday, the delegates repaired to the National Gliding Centre, where the finals of the Gliding competition, which had been in progress during the previous days, were being held. Owing to the scarcity of wind no long flights were attained, the best performance being put up by M. Henry Lumiere, President of the Aero Club of the South West. A banquet of some 300 covers, held at the Banne d'Ordananche, closed the proceedings.

R. C. W.

### LONDON AEROPLANE CLUB

Flying hours for the week, 50. Among new members the Club has much pleasure in welcoming Mr. C. D. Stanley and Miss Playfair. The Club have now taken over three machines from the de Havilland School of Flying. This makes a total of nine, which was much appreciated on Saturday, when 13.40 hr. were put in.

### MISR-AIRWORK, EGYPT

Mlle. Lutfia El Nadi who, as reported in our issue of September 7, is the first Egyptian lady to fly solo (shown in the accompanying illustration with her instructor, Mr. R. D. Carroll), is the Misr-Airwork telephone operator at Almaza Airport. She is, as will be seen, exceedingly pretty, and flies in white beach pyjamas to match the colour scheme of the Misr machines and uniformed instructors. Misr-Airwork S.A.E. entertained some 300 guests in the club enclosure and 1,000 in the public park at Almaza Airport on the evening of September 6. The club was brilliantly lit by flood lights, and 69 joyriders-by-night saw Cairo and the Pyramids beneath a full Egyptian moon. Night flying, including instructional work, lasted from 8 p.m. till midnight, accompanied by the strains of a



Mlle. Lutfia El Nadi, the first Egyptian lady to fly solo, with her instructor, Mr. R. D. Carroll, of Misr-Airwork.

military band, and those who tired of the flickering lights of aircraft danced inside the clubhouse.

Mr. Willy Seitz, the Swiss millionaire, arrived at Almaza on the same day in his Fokker monoplane *en route* to Nairobi for big-game shooting. His engine, which had developed trouble, was put right by the engineering staff. The comfortable Wilson Airways' six-seater "Dragon," which is to operate in Kenya Colony, arrived on September 7, and was also serviced by Misr-Airwork.

### HANWORTH (N.F.S.)

Flying has been somewhat restricted during the week, and the number of hours flown only totalled 42. On Saturday, September 23, a party from the Spot Auto Club were entertained, and on Wednesday, September 27, Miss Cumberbatch brought a party from the Ealing Women's Citizens' Association, most of whom took flights. On Friday, September 29, some visitors from Eton College were given a flight over their college. First soloists during the week were Messrs. Salusbury-Hughes and King, the latter is a member of the Insurance Flying Club. Cross-country flights were done by Mr. Spratt to Maidstone and return, and by Maj. Osmaston to Lowfold. Miss Reynolds had dual instruction on the Master of Sempill's "Puss Moth." A second Desoutter has been "tuned up" in the workshops, and as much as 20 m.p.h. has been added to its maximum speed.

The opening dance of the season was held at Hanworth Park on September 29. Like most dances at this Club it was an unqualified success, and the "party" spirit was in evidence from the very start. A factor which undoubtedly serves to maintain the popularity is the efficiency of the culinary department—the dinners at Hanworth are a worthy prelude to the dances.

### MAIDSTONE AERO CLUB

The Maidstone Aero Club have now a "Spartan," a "Moth," and a "Bluebird" available for all kinds of work. The Aero Club "At Home" was held on Sunday, October 1, and the next will be held on Sunday, November 5. The first of the season's dances will be held on Friday, October 27, and all those in any way interested in the Club will be welcome.

### GRAVESEND SCHOOL OF FLYING

The School's machines have been kept very busy during the past week in spite of the bad weather. On Monday, September 25, a K.L.M. machine landed with Mr. Plesman and Mr. De Vries of the K.L.M., who inspected the aerodrome. On Wednesday, September 27, another machine of K.L.M. landed, as it was prevented by bad weather from proceeding to Croydon; passengers were cleared by the Customs, and proceeded immediately to London by car. The air taxi run by Gravesend Aviation has done flights to Manchester, Ryde, Heston, Croydon, Bircham Newton, Dover, Ipswich, and King's Lynn. The Club's first dance of the season will be held in the clubhouse on Friday, October 6, and all visitors from other clubs will be welcome. The new Short monoplane has recently been doing its tests from Gravesend aerodrome. The erection of the new hangar is proceeding rapidly, and should be completed within a few weeks.

### HULL AERO CLUB (N.F.S.)

Now that the winter is setting in it is hoped that members will make every effort to make use of the social amenities offered by the Club. The Annual Ball will take place on Friday, October 27, at the Beverley Road Baths, and it is hoped that all members will do their best to make it a success. Tickets can be obtained from Mr. A. B. Croskin, 285, St. George's Road, Hull.

### NORFOLK AND NORWICH AERO CLUB

Instruction was given during the week to Messrs. P. Britton, J. C. Smith, G. R. F. Clarke, R. T. Ketton-Cremmer, and W. G. Watson, and solos were done by Messrs. H. C. Stringer, S. Hansel, A. R. Kirkby, J. B. Purefoy, P. M. Britton, A. J. S. Morris, A. R. Cox, and A. J. Sayer. Mr. J. B. Purefoy has passed his tests for an "A" licence. The next dance at the Club is being held on Wednesday, October 11, Howard's Dance Band being in attendance. The Annual Ball is being held on Friday, November 3, at the Thatched Assembly Rooms.

### READING AERO CLUB

The ladies of the Reading Aero Club have sent out an invitation to the lady pilots of aviation to dine with them on Saturday, October 21. There will be a "Punctuality" prize for the lady pilot landing nearest to 12.45 p.m., Reading time. Any lady pilots who do not receive invitations and who wish to attend should apply

to Mrs. Elise Battye or Mrs. Charles Powis, who are organising the luncheon; the term "lady pilot" includes all lady members of flying clubs whether qualified or not. Mr. V. de C. Dashwood, who recently qualified for his licence, has gone off on a trip to Germany in his "Puss Moth." Mr. Powis has also been to the Continent to collect the "Moth" of Madam Charnaux, who is buying a "Hawk." Herr Ernst Persicaner has returned from Germany and is putting in hours, and Mr. G. Ogilvie has joined the ranks of private owners by purchasing a "Gipsy I Moth."

### HATFIELD GOES THEATRICAL

Hatfield, the de Havilland aerodrome and the new venue of the London Aeroplane Club, went all theatrical on Friday, September 29. The occasion was the Garden Party of the Stage and Screen Aero and Sporting Club. A mounted gymkhana was part of the programme, and the proceeds of the afternoon were in aid of the Actors' Orphanage Fund. An "all-star" cast, under the direction of Sir Gerald Du Maurier, President of the Club, was arranged in one of the hangars, and a talented cast therein lured people away from the numerous side shows, which, out on the aerodrome, were being run by well-known actors and actresses throughout the day. It had unfortunately been found impossible to arrange for any flying items to form part of the programme, but those present were given a good idea of the many types of aircraft which there are available for private owners to-day, by the variety which arrived with visitors during the afternoon. Flt. Lt. N. Comper, the designer of the "Swift" and the "Mouse" (the latter was described in FLIGHT last week) came in a "Puss Moth" with a co-director, Mr. F. R. Walker, who has now recovered from his regrettable accident which occurred during the King's Cup Race last summer; Mr. R. C. Preston came in a "Monospar" with two friends; Mr. Percival in one of his "Gulls"; Mr. Samuelson in the "Tiger Moth" of the Standard Telephone & Cable Co., Ltd., and many others. Apart from these, the normal work of the Flying School, the London Aeroplane Club, and the R.A.F. Reserve Officers' Flying Club, all went on so that there was any amount of flying to be seen.

### NORTHAMPTON AERO CLUB

At a General Meeting of the Committee and members of the Northampton Aero Club in the club-house on Wednesday, September 20, the reconstruction policy of the Club was outlined by Capt. Duncan Davis, and was unanimously adopted. Capt. Davis and Mr. T. Rose, who is now installed as manager and instructor, have devoted most of their time in rallying up members and improving conditions generally, assisted by two pupils, Messrs. D.



ALLEZ OOP! Flt. Lt. N. Comper (right), Mr. F. R. Walker (with the vibrant hand), Mr. Jones (with his eye on the departed ball), Miss Iris Baker (Sherwood Forest cap), Mrs. Kimmins (fur-protected shoulders) and Com. A. Kimmins, R.N. (left) bombarding the defenceless coconuts. (FLIGHT Photo.)

Smith and F. R. Wilson. The first task was to clear out the office and brighten up the club-house; the first of these tasks was accomplished by the simple expedient of burning most of the papers. During the clearing up the party of four lived in the club-house, doing their own cooking. It was discovered that Capt. Davis is quite adept at boiling eggs. Smith suffers from the delusion that they should be boiled for 25 min., and Mr. Rose is quite incapable of frying them. While all this was going on the instructional side was not neglected, and the daily sheets show an average of about five hours; also, Messrs. E. T. Danson, P. Tyzack, J. Linnell and Capt. G. Shaw have been flying solo. The Rally of members arranged for Sunday was a great success, Mr. Thorn doing aerobatics on a "Tiger Moth" and a "Gipsy Moth." On Thursday, September 21, a day of low clouds, Mr. Brian Allen landed with Madame Marcelle as passenger; the latter cooked an excellent lunch for those present, which was very much appreciated. It is hoped she will call again. Mr. P. James has been putting in quite a number of flying hours dual and solo to renew his "A" licence. Miss Pacey and Miss Hamilton are also working for "A" licences.

Total flying time for the week ending September 30 was 20 hr. 35 min. Wind and rain prevented any flying on two days. Mr. F. R. Wilson did an excellent first solo and duly increased the receipts of the refreshment department afterwards. On Sunday the Club had a demonstration of models, and received a visit from Mr. "Johnnie" Walker, who is looking very much better after his cruise.



HATFIELD: From the cockpit of a de Havilland Flying School "Tiger Moth" the aerodrome looked like this early in the afternoon. (FLIGHT Photo.)



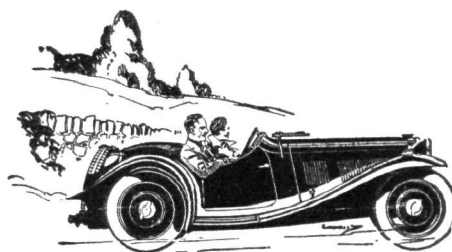
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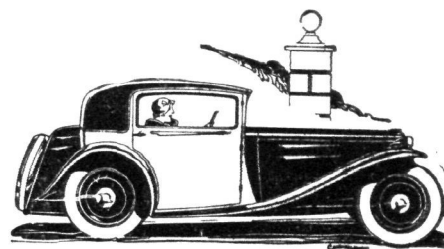
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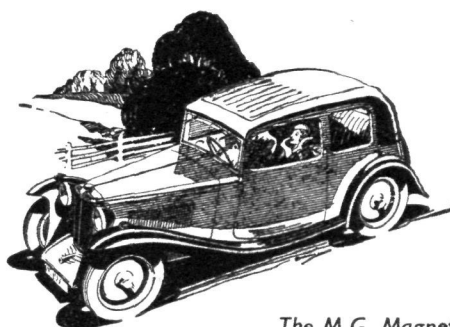


*The M.G. Magna Continental Coupé*

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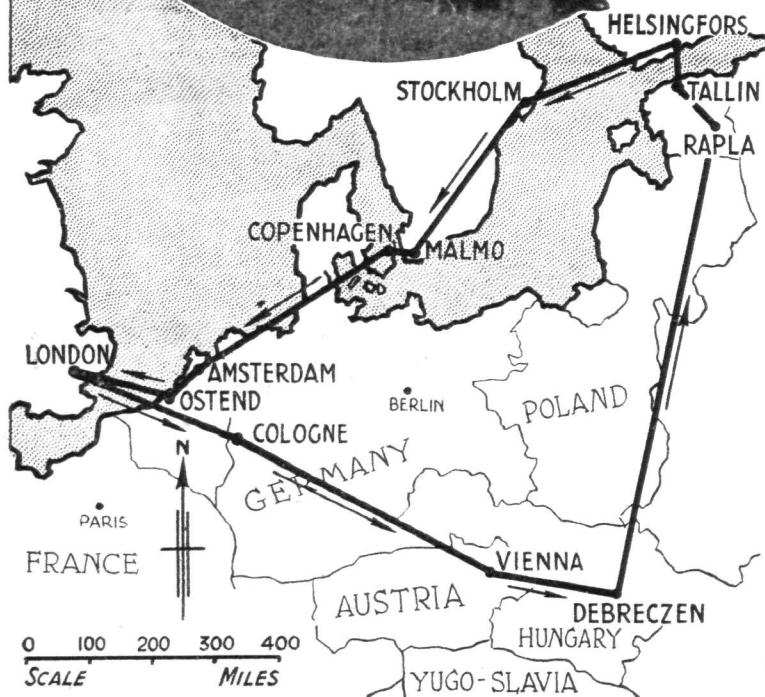


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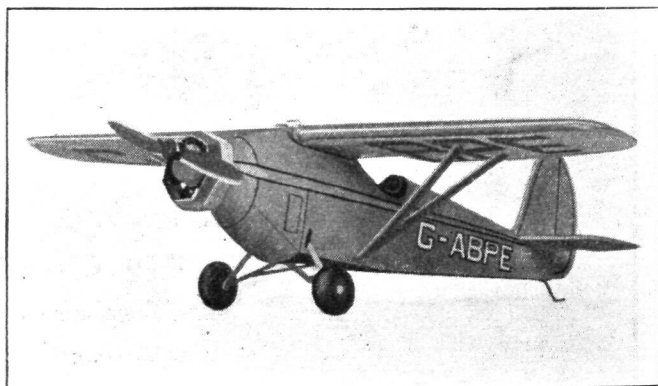
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He fairly hurled his "Swift" about the sky for the benefit of members. Mr. Geoffrey Linnell also flew it, and discovered one of the reasons why it is called "Swift." Of course, having tried it out, he has now decided to own one. The Club's chairman, Capt. Geoffrey Shaw, returned from an air tour of the South of France looking very little the worse for it (much to the surprise of his friends).

### OLD ETONIAN FLYING CLUB

The Old Etonian Flying Club, a notice of which appeared in *FLIGHT* for July 27, is to come into existence within a very short time, and will operate from Heston. The originators of the idea are Messrs. J. A. H. Parker and H. S. Burge; it has the approval of the Provost of Eton, the Secretary of State for Air, Lord Londonderry, and Sir Philip Sassoon; also, it will have the warm support of Air Marshal A. E. Borton, C.B., C.M.G., D.S.O., A.F.C., whose advice and encouragement has been of great value. The other members of the temporary committee are the Master of Sempill, Lord Apsley, Mr. R. R. Ovey, and Mr. Roderick Denman. One machine has already been purchased, and was ready for flying by October 1. Arrangements are being made with Airwork, Ltd., for the maintenance of the Club's machines and providing instruction. Over 300 Old Etonians have already promised to join the Club, of which 150 will be flying members.

### AT COLOGNE

On Saturday and Sunday, September 23 and 24, the Cologne branch of the German Flying Club held an International Meeting which was in the nature of a return for the Cinque Ports International Flying Meeting held in July. Quite a number of Club members flew across; Mr. Ken Waller and Mr. Michael Garraway flew over in Mr. Wilson's Bristol Fighter, which he had very kindly lent for the occasion, Capt. Braddell was flown over by Capt. Marc Diamant in a "Puss Moth," Mr. and Mrs. W. E. Davis in a "Gipsy Major Moth," Mr. Sparrow with Col. Miskin, also in a "Gipsy Major Moth," Mr. Opie in his "Gipsy I Moth" and Mr. Chater and Mr. Cann in a 504 Avro.

The actual flying during the meeting was good but limited owing to the few types present. The whole organisation of the meeting was excellent, especially the way in

which all worry and bother of Customs had been eliminated; on arrival, pilots were simply relieved of their log books, baggage, etc., and lead off to the guest tent. Each machine was labelled with the owner's name and fuel requirements, and luggage was sent off to the hotels at which the owners were staying. This special mark of courtesy by the Customs authorities was greatly appreciated by everyone concerned. The hospitality of the Cologne Flying Club knew no bounds, and the visitors were treated to dinners, luncheons, cabaret shows and a cruise on the Rhine. The whole town seemed to co-operate in making the meeting a success, the hotels providing free accommodation. All the visitors were presented with souvenirs and the Cinque Ports Flying Club with two beautifully bound old Bibles with superb prints by famous artists. The weekend was brought to a close by a delightful visit to Mr. Ernst Farnsteiner's hunting box in Gondlesheim. About 14 machines and 60-70 people visited this delightful spot set in the midst of the Eifel Mountains and surrounded by scenery as near the ideal as scenery can be.

Besides this visit, the normal work of the Club has carried out. Sir Arthur Grant, Messrs. Peat, Allen and Patterson have passed tests for "A" licences, and Mr. F. Brown, the *Daily Express* scholarship winner, has successfully done a first solo. The flying times for the week amounted to over 50 hr. and last week the record of 69 hr. dual and 23 hr. solo was reached.

### IRISH AERO CLUB

A new D.H. "Moth," fitted with a "Gipsy III" engine, has just been purchased by the Irish Aero Club, and was flown over to Baldonnell Aerodrome, County Dublin, from Manchester recently by the chief instructor, Mr. C. F. French. At the present time the Club is seeking admission to the Federation Aéronautique Internationale, and for this purpose had requested the Irish Free State Government to grant it official recognition as the national organisation of that country.

The first branch club of the Irish Aero Club has just been founded at Sligo under the secretaryship of Mr. Arthur Hunter. A suitable field near the town is being licensed, and until such times as the membership of the branch warrants the housing of a machine at Sligo one of the Club's D.H. "Moths" will visit the town each Wednesday for instructional purposes.

## Airisms from the Four Winds

### Prince of Wales' Chief Pilot

It is announced from St. James' Palace that His Royal Highness the Prince of Wales has appointed Flt. Lt. E. H. Fielden, A.F.C., to be Chief Air Pilot and Extra Equerry to His Royal Highness and Flt. Lt. H. M. Mellor to be Air Equerry.

### French Height Record Claim

M. GUSTAV LEMOINE, the French airman, claims a new height record of 44,820 ft., which, if authentic, beats Capt. Uwin's record by just under 1,000 ft. The flight was made on Thursday, September 28, and the machine used, a Potez 50, fitted with a Gnome-Rhone K.14 engine. Incidentally, this same machine with the same pilot set up two new international class speed records earlier in the year.

### The Lindberghs Leave Moscow

COL. AND MRS. LINDBERGH left Moscow in their seaplane on Friday, September 29, for Tallin, Estonia. They were seen off by leading Soviet officials, whose guests they had been during their week's stay in Russia.

### R.A.F. West African Tour

THREE Vickers "Victoria" machines of No. 216 (Bomber) Squadron will leave Heliopolis aerodrome on Saturday, October 14, for a tour to the West Coast of Africa. Air Commodore G. R. Bromet will go with the flight as representative of the Air Officer Commanding Middle East Command, and the flight will be commanded by Sqd. Ldr. E. G. Hilton, D.F.C., A.F.C.

### Soviet Stratosphere Claim

A REPORT comes from Russia that the Soviet Balloon "Stratostat U.S.S.R." has established a new world's record by ascending to a height of 19,000 metres (62,320 ft., nearly 12 miles). On Saturday, September 30, the balloon

left the ground from the Moscow Airport and eventually came down on the banks of the Moscow River near the village of Kolomna, after having been in the air for 8 hr. 15 min. The balloon was manned by M. Prokofieff, aged 31, and an experienced balloonist, M. Birnbaum, a Soviet Army airman, and M. Godunoff. Wireless was kept up with the ground during the whole flight. At the greatest height the temperature inside the hermetically-sealed aluminium gondola was 86 deg. Fahrenheit, while outside it was 120 deg. below freezing. Instruments were carried to enable observations to be made of the cosmic rays, electrical conductivity, wireless receptivity, moisture and other conditions. The sealed instruments are being

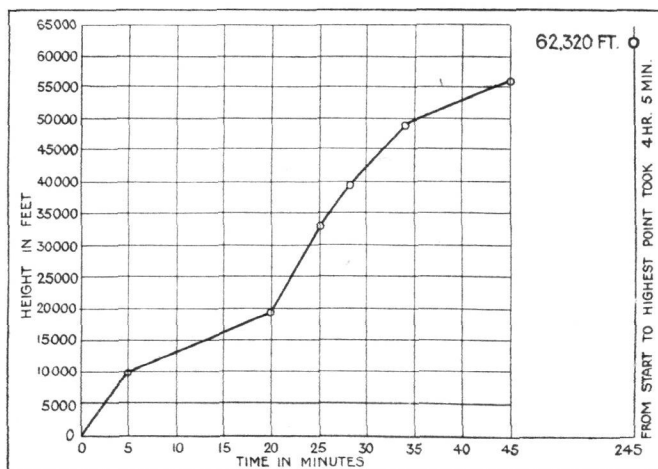
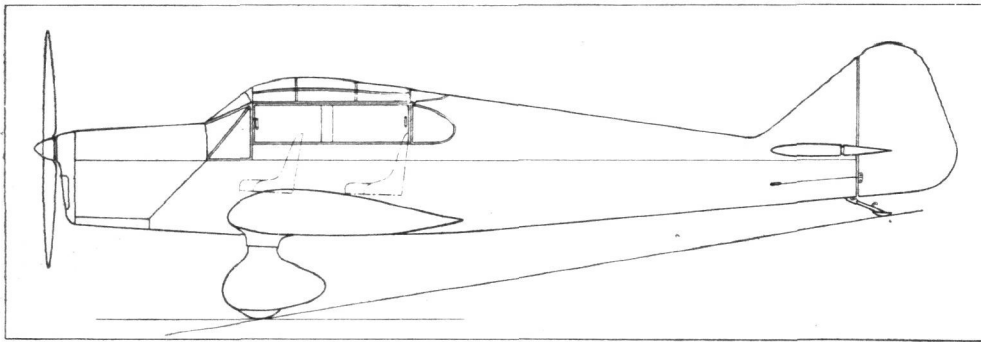


Chart showing the rate of ascent of the Soviet balloon



**CLOSED IN :** The latest and next edition of that popular light aeroplane, the Miles "Hawk," will have a cabin top, as seen in this sketch. The undercarriage will be of the single strut type—not so far seen in recent years in this country—and a tail wheel will be fitted. The first one (with a "Gipsy III" engine), which is being built for Mr. S. Cliff, should have a high cruising speed.

examined by other learned Soviet professors, who will issue a more detailed scientific report later. If this record is authentic the Soviet balloon has exceeded the height reached by Prof. Piccard by just over 9,000 ft. According to a report from Moscow, the barograph of the flight has been published.

### Kingsford-Smith's Australian Flight

AIR COMMODORE SIR CHARLES KINGSFORD-SMITH left Heston Airport for Lympne on Tuesday, October 3. His intention was to await favourable weather before taking off on a fast flight to Australia. He, as already announced in FLIGHT, is flying a Percival "Gull" ("Gipsy Major").

### Sir Alan Cobham's Air Displays

FOLLOWING his tour of over 300 towns in England, Scotland, Ireland, and Wales, Sir Alan Cobham is returning to the London district this week-end for the final displays of the National Aviation Day Campaign. One squadron will be seen at Molesey on Saturday and Staines on Sunday, while the other will be at Dartford on Saturday and Romford on Sunday. The return of the squadrons is to be heralded by an air re-union over London on Saturday morning, when, unless prevented by low clouds, they will meet over Trafalgar Square at noon approximately and combine in a grand formation flight over Central London.

### By Spartan "Cruiser" to Australia

CAPT. W. P. CRAWFORD GREENE, M.P., has chartered a Spartan "Cruiser" (three "Gipsy Majors") for a trip to Australia and back. The flight will be made in easy stages, with many visits *en route*, and during the time spent in Australia an extensive tour will be made. This will enable Australians to see a type of machine new to them and one which is already making a name for itself as eminently suitable for feeder line work or on scheduled routes where a capacity for six or eight passengers is sufficient. The machine which is being taken out is one of the standard ones as has been used with such success on the Heston-Cowes service run by Spartan Air Lines during the past summer, except that extra tanks have been fitted, giving the machine a cruising range of eight hours at a speed of 118 m.p.h. The trip will commence on October 9, and the machine is due at Sydney on October 29. The start back will probably be about November 21. Mr. P. W. Lynch Blossie, chief pilot to Spartan Air Lines, will fly the machine, and as he is thoroughly conversant with Australian conditions, having worked out there on air-line working before coming to this country, he should be able to take full advantage of the opportunities for demonstrating the "Cruiser" which a trip of this nature is bound to give him. "Gipsy Major" engines are already well known out there, and their inclusion in the specification should ensure a warm welcome by Australian pilots and a trouble-free trip.

### The Coupe Zenith

FOR the fifth year in succession the winning aeroplane in the Coupe Zenith has been fitted with a "Gipsy" engine. This year the winner was M. Finat, whose low-wing Farman monoplane was carried round the circuit at 220.63 km./hr. (137 m.p.h.) by a "Gipsy Major" engine. The circuit this year was Paris, Poitiers, Bordeaux,

Carcassonne, Niems, Lyons, and back to Paris, a distance of 1,577 km. (981 miles). M. Finat also gained second prize for a previous attempt, when he averaged 206 km./hr. (128 m.p.h.). MM. Arnoux and Brabant gained third prize, also with a Farman monoplane of similar type, but with a Renault engine, at a speed of 203 km./hr. (126 m.p.h.).

### The Fifth Round Poland Flight

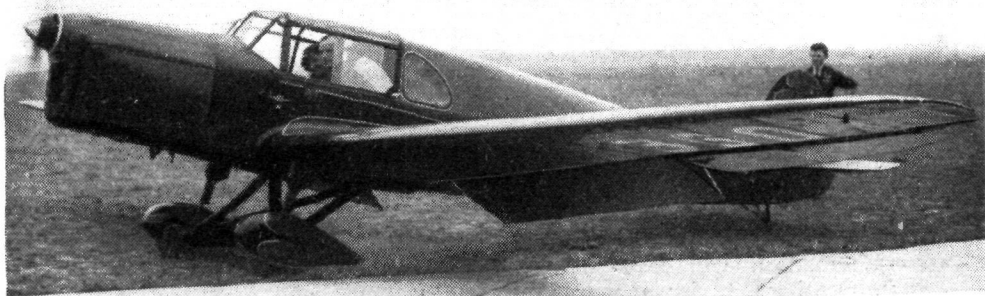
THE fifth annual round Poland flight was finished on September 10, and once again it was a triumph for British engines; 36 competitors started on September 2, and the first five to finish had engines built by manufacturers in this country. The final order was:—1, M. Pronaszko, on an R.W.D.5 ("Hermes IV"); 2, M. Szarek, on an R.W.D.8 ("Hermes IIB"); 3, M. Derzewiecki, on an R.W.D.7 ("Genet"). The fourth and fifth home were members of the Warsaw Aero Club, both flying R.W.5's ("Hermes IIB").

### A Concours D'Elegance

ON October 27 and 28 a *Concours d'Elegance* will be organised by the Lamport Hall Club, at Lamport, which is situated near Northampton. This country club has been opened in Lamport Hall, the ancestral home of the Northamptonshire Ishams. Mr. Gyles Isham is the President of the Club, and Messrs. E. C. Simon and J. W. Buckley are managing it. Aeroplanes attending this event, at which many members of Brooklands will be present, should be landed at Sywell aerodrome, and pilots are asked to bring their own pickets and cockpit covers as hangar accommodation is strictly limited. Many special arrangements are being made to make the week-end a success for those attending. On the Saturday there will be a dinner-dance and cabaret, and on Sunday an "Old English Roast Beef" lunch. Entries and applications should be sent to the secretary, Lamport Hall Club, before October 15. The total cost of the week-end will be £2 2s.; the dinner and dance only, 17s. 6d. to non-members and 15s. to members; Sunday luncheon, 4s.; and the *Concours d'Elegance* for motor-cars only, 2s. 6d. The Hall itself is well worth a visit, and contains an enormous amount of ancient architectural interest.

### Students' Branch, R.Ae.S.

ON Tuesday, October 24, Mr. E. V. Dolby will deliver the inaugural address before the Students' Section, Royal Aeronautical Society, at 7 p.m., at 7, Albemarle Street, W.1, with a paper on "The Recent Development and Immediate Future of Civil Aviation." The chairman will be Lt.-Col. Shelmerdine, Director of Civil Aviation.



**FLAPPED :** Mr. A. S. Gibbons, who has for some considerable time been a staunch adherent to the "Klemm," has now forsaken his "Pobjoy"-engined machine for this new model with a "Gipsy III," which he has purchased from Herr Fretz, of "Swissair." As will be seen in our photograph, it has large flaps on the trailing edge of the wing which, in effect, materially increase the camber, so that slow landings and quick take-offs can be made. He tells us that he can cruise at about 125 m.p.h. and that his landing speed is very slow. Herr Fretz had this machine built for last year's Rund Flug. (FLIGHT Photo.)

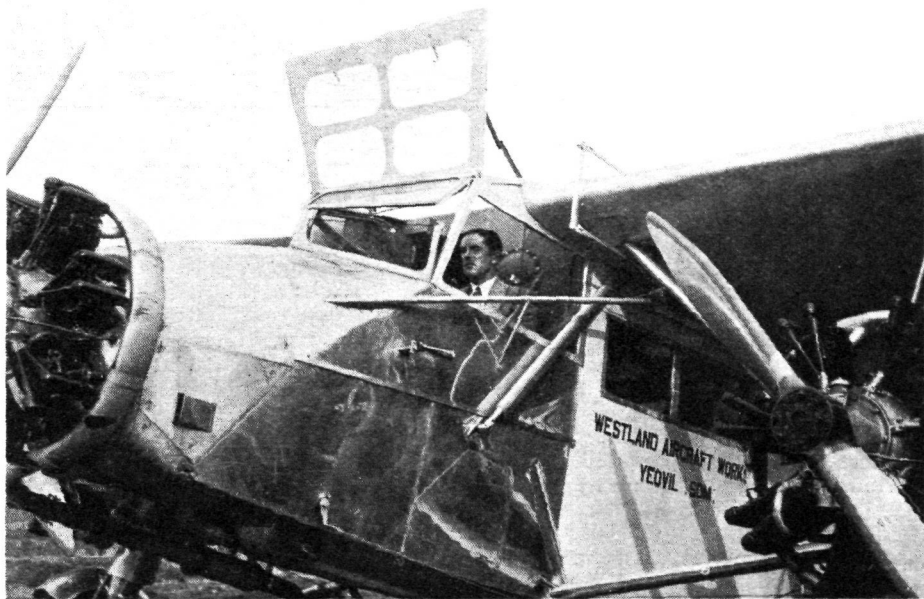


## THE LATEST WESSEX

**W**ESTLAND AIRCRAFT WORKS have altered their well-known three-engined "Wessex" (three seven-cylinder "Genets") to carry eight persons, including the pilot, and this, the latest, version was described in *FLIGHT* for September 14.

A few days ago we had the pleasure of a flight in this model, and found that the added accommodation has in no way spoilt the comfort or general attractiveness for operators who want a machine entirely suitable for really hard commercial work on feeder lines or on scheduled ferry services like that run by the Portsmouth, Southsea & Isle of Wight Aviation Co., Ltd., between Portsmouth and Ryde and Shoreham-by-Sea. In fact, for most uses the extra accommodation will undoubtedly enhance the value of the "Wessex" considerably. Imperial Airways have nothing but praise for the "Wessex," which they have had for some considerable time and which they use for charter work all over the world. It is probably one of the hardest worked aeroplanes in their fleet, but nevertheless their upkeep costs have been almost negligible. It is its robust construction which immediately attracts anyone with engineering knowledge who looks at this machine. After all, freedom from upkeep costs is one of the most important desiderata to the operator, and this point of view has been kept to the fore by those responsible for the "Wessex."

The latest version has a few differences when compared with the older models. The wing struts are now made from streamline steel tube instead of round tubes faired with wood. Shaped mudguards have been fitted to replace the flat shields used previously, and the undercarriage has been widened in order to give a larger wheel track and better to carry the increased load. This has also been allowed for by fitting larger wheels. The model we were able to inspect and photograph had been sent up somewhat hurriedly for inspection, and the Townsend ring-type engine cowlings had not been fitted. In the pilot's cockpit there is immediate evidence of care and thought for the pilot's comfort. The windscreen on the left-hand side is divided and so arranged that the lower half can be opened outwards to a greater extent than the top half. This deflects the draught clear of the intervening gap while at the same time giving the pilot a space to look



This view shows how easily the pilot of the "Wessex" can raise the cockpit roof and also how the windscreen opens in front of him, making flying in bad weather safer than with a closed screen. (FLIGHT Photo.)

through between the two halves. In bad weather this is an excellent feature. The roof of the cabin, which is lighted with cello panels, hinges up as a whole, and the latest model will have a small panel above the pilot which he will be able to open and put his head through in order to assure himself that no aeroplane is landing over him when he himself is about to take off. The main cabin is well upholstered with very comfortable seats, having adjustable head rests, and has a generous equipment of hat racks and other convenient accessories. There are instruments on the forward bulkhead, so that the passengers can see what is happening, and the door between them and the pilot has a large window in the upper half for communication purposes when it is not desired to open the whole door.

From the performance point of view we do not think that any great difference will be found between this and the earlier model. We were not able to try the machine ourselves, but were able to see that for normal purposes the performance on any two engines is admirable. We understand that height can be maintained at 5,000 ft. with full load under these circumstances. The Westland patent rudder bias relieves the pilot of all trouble should he have to fly on two engines, and both this and the tail trimming gear appeared adequately sensitive. A well-fitted lavatory and luggage space are aft of the cabin.



This view shows that there is no difficulty in flying the "Wessex" with one of the engines stopped. Actually we made a circuit of Heston Airport like this, climbing at quite a fast rate after the photograph had been taken. (FLIGHT Photo.)

# Airport News

## CROYDON

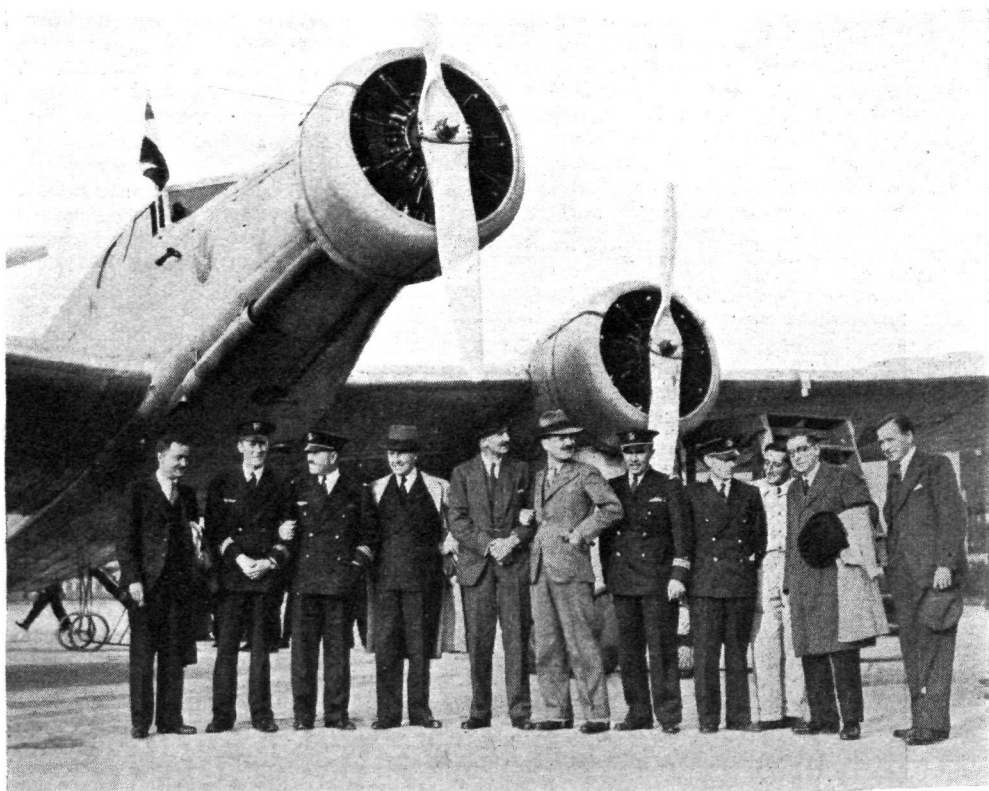
**A**N outstanding flight from the Airport of London last week was that of Capt. Wilcockson, commanding a special Imperial Airways "Heracles" type aeroplane, leaving Croydon for Beauvais on Sunday morning with the Rt. Hon. J. Ramsay MacDonald, M.P., the Marquis of Londonderry, Sir Christopher Bullock, Col. Shelmerdine, and Air Marshal Sir Hugh Dowding, amongst others on board. Beauvais was reached at 10.29 a.m. The Prime Minister had expressed a wish to be there by 10.30 without fail, as the party was to attend the inauguration of the memorial at Allonne to those who lost their lives in the *R.101* disaster. The weather on Sunday was far from good, and on the return journey from Beauvais Com. Wilcockson was above unbroken cloud all the way. Over Croydon he came down through it, and much impressed the Prime Minister by coming out exactly over the airport. Mr. MacDonald remarked that he had flown over cloud on other occasions, but that there had always been holes in the cloud through which to come down. If air-line pilots could only fly when there were holes in the clouds, the regularity of travel for which the air lines are famous would cease to be a matter taken for granted by the air-travelling public. Com. Wilcockson had announced in advance what time he would arrive back at Croydon, and exactly to the minute he was observed to come down through the cloud to land. Last week was I.A.T.A. week, during which the directors of almost all European air lines arrived at Croydon by air. Considerable local interest was displayed when Maj. Martin Wronsky, of Deutsch Luft Hansa, flew from Berlin in the new fast Junkers "JU.52," which has a cruising speed of 150 m.p.h. Another interesting aeroplane to come in was the Air-France Dewoitine "D.332," which did the Le Bourget-Croydon journey in 1 hr. 7 min., and later the return trip in 1 hr. 11 min. On board this machine were M. Louis Allegre, General Manager, Air-France; M. Briend, General Secretary, Foreign and Commercial Department, Air-France; and a Director of the Bank of Indo-China.

Mr. A. Plesman and Mr. de Vries, Managing Director and Foreign Manager of K.L.M., landed from the Amsterdam-London plane of that company at Gravesend, where they were received by Capt. Leverton, K.L.M. Airport Manager, Croydon, whom the Gravesend Aviation Co. had flown from Croydon in a "Fox Moth." The Airport of London has two natural emergency landing ports for bad weather, besides Lympne. These are Gatwick for aircraft on the Southern route, and Gravesend for aeroplanes on the Northern route, which latter leave and enter England at the mouth of the Thames. At Gravesend a hangar is under construction capable of housing aeroplanes as large as the K.L.M. Fokker "F.12" type. The aerodrome is as large as Croydon, is level, and notably free from fog. This visit of K.L.M. directors and their interview with the directors of the Gravesend Aviation Co. may serve as a reminder to the Air Ministry that Airport of London housing, landing and rental charges are considered far too high. The surface at Croydon, too, is far from satisfactory for night flying, and extensive levelling seems indicated in the near future before

night flying becomes the rule rather than the exception. If one company operating on the Northern route left Croydon, others might follow, especially as all charges at Gravesend may be as much as 40 per cent. below those at Croydon for regular operators. Internal air traffic would tend to use the air base with the most reasonable charges, especially if Continental air connections could be made. Gravesend is only some 50 minutes by road from London, and there are fast train services.

Early in the week Dr. Colyn, Netherlands Prime Minister, arrived by K.L.M. He was met by the British Prime Minister's representative, who took him away by car. The car sent by the Netherlands Legation arrived there with luggage only, and perturbed officials rang up Croydon to know where the Dutch Prime Minister had gone to. On Wednesday morning Dr. Colyn again made use of air transport, this time flying to Paris by Imperial Airways; he was "interviewed" by a pushful reporter with the usual string of leading questions. About the only remark the Prime Minister permitted himself was when, in answer to a question whether prospects would be brighter, he pointed to the sky and said the sun might break through in an hour or so. From this the reporter manufactured an important-seeming column in a newspaper, which was neatly finished off by a portrait of someone totally unlike Dr. Colyn.

On Sunday flying weather was bad, and on one or two routes there were delays. I heard several passengers waiting in the Main Hall complain that the weather report map was devoid of all symbols indicating current conditions. Especially when the weather is not very good, hourly weather reports are as interesting to the air traveller on Sundays as on weekdays, and as there are perhaps more members of the visiting public at the Airport on Sunday than on any other day, the time has surely come



**AIR-FRANCE AND I.A.T.A. :** The French delegates to the International Air Traffic Association arrived at Croydon on September 26 in the new Dewoitine D.332. Left to right : MM. Oger; Bajac, Chief Pilot, Air-France; Doret, Chief Pilot, Dewoitine; Briend, General Secretary, Air-France; Wooley Dodd, Manager, European Division, Imperial Airways; Allegre, Managing Director, Air-France; Burello, Second Pilot; Queyret, Wireless Operator; Crampel, Mechanic; Gavay, Bank of Indo-China; and Mr. G. MacKinnon, Arrow Aircraft Insurance Association.

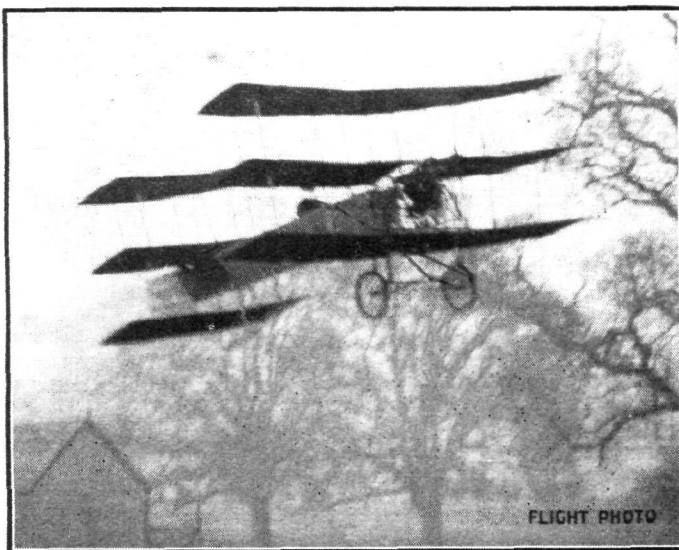


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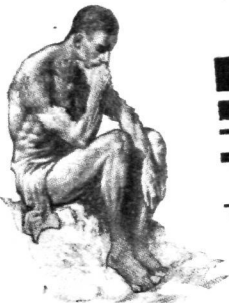
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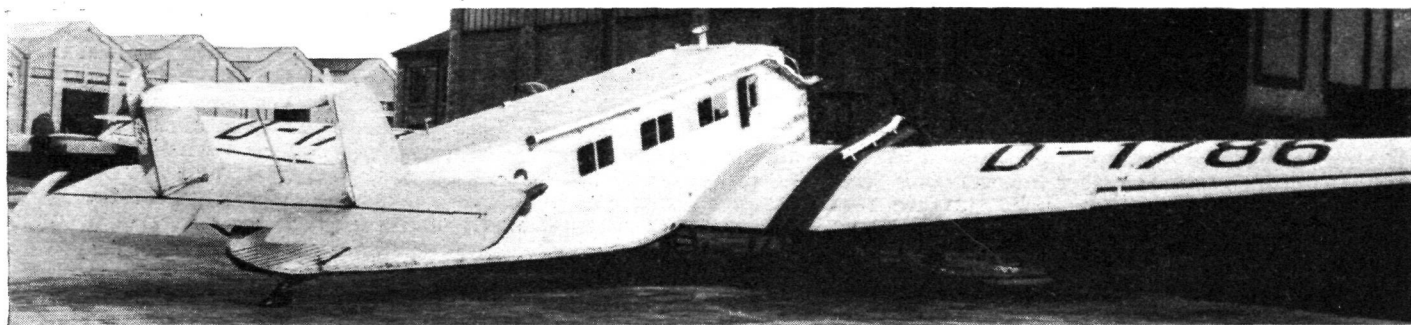
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**FOR LUFT HANSA NIGHT SERVICE :** The Junkers Ju.52.3m. which Deutsche Luft Hansa have put into operation on the night service between Berlin and Croydon during the winter. (FLIGHT Photo.)

when Sunday weather reports symbols should be posted up in the Main Hall.

Several officials of various air traffic companies were caught wearing white cap covers with uniform on Sunday, October 1. The cap covers were hurriedly removed, but in the old service days this heinous offence would have meant "drinks all round." Mr. Gordon Olley, of Imperial Airways "Special Charter" Department, has been busy. On Friday he flew two sportsmen to Dundee for the opening of the pheasant shooting season, and on Saturday he took a party to Blackpool, who wished to see the

town illuminations by night from the air—a novel sight.

Last Friday, shortly after noon, I saw a notice at a London railway terminus that a boat from the Continent was still held up by dense fog. Its passengers should have been in London by breakfast time. At the time I saw the notice a return journey to that particular country had been made by air and a midday service was about due to start. This air traffic to and fro had been made in blue sky and sunshine above a solid layer of fog enshrouding sea and earth in many places.

A. VIATOR.

## FROM HESTON

**A**S announced in FLIGHT for August 31 last, the latest model of the Direct-Control Cierva "Autogiro" is fast approaching completion in the workshops of Airwork, Ltd., at Heston. Technical details may not yet be released, but a greatly improved performance is expected from this model. The new Spartan "Cruiser" being delivered to Yugoslavia left Heston on September 25 for Belgrade with two spare "Gipsy" engines skilfully packed into the cabin. Mr. Vladimir Strizewski, a staff pilot of the "Aeropot," which will operate this machine on regular services, was sent over to England to collect it, and is expected to take about 10 hours' actual flying time on the return journey, travelling to Belgrade via Paris, Strasbourg and Vienna.

Demonstrations were given at Heston on September 28 and 29 by Maj. Van Rollegheem of a new fire- and heat-resisting material of his own invention. Maj. Van Rollegheem was a Belgian pilot in the war. As a fighting pilot, he saw many machines come down in flames, and it is stated that he has devoted three years to the development of the material demonstrated. In one experiment Maj. Van Rollegheem spent some minutes in an enclosure surrounded on three sides by flames, emerging unscathed and triumphantly waving a box containing two puzzled mice. A further demonstration was the breaking, by smashing it down on a shovel, of a small petrol tank of standard con-

struction, and the subsequent failure to break a similar tank of Maj. Van Rollegheem's own construction by the same means. The second tank, though bent completely out of shape, retained its contents, and no petrol escaped.

Sir Ernest Petter, Chairman of the Westland Aircraft Works, landed at Heston on the 28th in his newest product, an improved "Wessex" machine with accommodation for six passengers.

Mr. Robin Cazalet stayed the night at the Airport Hotel and flew the next day to Ireland.

On the 30th the Export Department shipped a D.H. "Gipsy Major Moth" to Bombay for Col. Duncan, who has been on leave in England and who left by boat for India on the 28th.

Wrightson & Pearce chartered Mr. Loel Guinness's Belanca to fly Miss Kathleen Horlick, with her fiancé, Mr. Kenneth Wagg, and a friend to Le Touquet for the week-end.

Mr. Douglas Fairbanks, Jnr., paid his third aerial visit to Manchester this week, in connection with the film "Nymph Errant." His first visit was made in Lord Amherst's machine, his second by Imperial Airways, and this, the third, was in a British Air Navigation Co. machine. B.A.N.C.O. also conveyed Lady Ludlow to a race meeting for the second time in a fortnight—on this occasion to Newbury.



### King's Cross Airport

THE question of a Central London airport has cropped up again; this time an alternative scheme has been put forward by Mr. Charles F. Frobisher. Instead of a huge aerodrome over St. Pancras and King's Cross, Mr. Frobisher suggests a revolving platform 300 ft. wide and 1,800 ft. in length. The cost he estimates to be in the nature of £1,500,000, compared with the £5,000,000 which the other scheme would cost. Apparently the two greatest objections to both these schemes are the extra cost of lighting and the added attraction they would make to London as a bombing target in time of war. As regards the latter objection, it might be pointed out that there are several large railway stations in the centre of London, the seat of the Government, a War Office, an Admiralty, and an Air Ministry, not to mention the whole of Fleet Street, which must have been a similar attraction in the last war. In any case, there would not be much point in bombing an aerodrome which did not house service aircraft.

### Luncheon to I.A.T.A. Delegates

THE delegates to the International Air Transport Association's conference were entertained to luncheon at Claridge's by the Government on Thursday, September 28. Lord Londonderry, the Secretary of State for Air, proposed

the toast of the Association, to which Mr. G. E. Woods Humphery replied. Jonkheer I. L. van den Berch van Heemstede, manager of the International Air Traffic Association, recalled the great progress made by Imperial Airways, and added that, in his opinion, there was a danger of the various Governments putting a net too tight round them; air traffic needed more freedom to grow.

### The Coast Defence Exercises

THE following notice has been issued jointly by Admiralty and Air Ministry:—In view of the fact that certain tactical conclusions have been drawn in some newspapers in regard to the recent training operations in which Naval and Air Forces took part off the Firth of Forth on September 22 and 23, the Admiralty and Air Ministry desire to state for public information the nature of the particular exercise that was carried out. It was of an elementary nature designed to exercise shore-based aircraft in work over the sea in contact with Naval forces, and also the anti-aircraft defence of the ships. The movements and dispositions of the Naval forces were arranged solely with this object. There was no intention of testing the relative power of the various arms in the attack or defence of a coast. For this purpose also the Military Coast Defences took no part in the exercise.

# METEOROLOGICAL BROADCASTS FROM HESTON

THE following arrangements came into force on Monday, September 11, 1933.

The Air Ministry broadcasts daily, at the times given below, from the Air Ministry Radio Station, Heston Airport, by radio telephony on a frequency of 360 kc/s. (833 m.), weather reports and forecasts, and navigational warnings. The messages are read through once at normal speed and then repeated at dictation speed.

**Weather Reports and Forecasts.**—The weather reports are from stations situated on five routes and in two areas, as follows:—

Route (a), *Eastern Route to the North*. Cranwell, Harrogate, Newcastle.

Route (b), *Western Route to the North*. Upper Heyford, Coventry,\* Birmingham, Chester, Liverpool, Holyhead, Manchester, Southport,\* Renfrew.

Route (c), *West Route*. Ross-on-Wye, Pembroke.

Route (d), *South-west Route*. Farnborough, Southampton, Amesbury, Portland Bill, Plymouth.

Route (e), *South-east Route*. Croydon, Biggin Hill, Lympne, Dungeness.

Area (a), *East Anglia*. Felixstowe, Yarmouth.

Area (b), *London Area*. Heston, Stag Lane.

The reports give the time of observation and the general state of the weather, the visibility, the amount and height of the base of the low cloud and the direction and speed of the wind at each station *at the time stated*, e.g.—Amesbury 0700: Partly cloudy; visibility 3 miles, low cloud 4/10ths at 1,000 ft., wind north-west 5 miles per hour.

The forecasts, which are divided into appropriate areas covering Great Britain and Northern Ireland, are prefixed by a statement of the general meteorological conditions existing at the time of issue, and give the surface wind, upper winds at the layer of 2,000-3,000 ft., weather and visibility expected in the succeeding period, which varies, as shown in the time-table, according to the time of issue, e.g.:—

"Depression north of Faros. Pronounced cold front Aberdeen to Valencia moving south-east, reaching Midlands of England this evening and south-east England early to-morrow.

"In England, Wales and South Scotland, in advance of front, surface wind south-west, fresh or strong to gale in exposed places with overcast sky and continuous rain. Upper wind 2,000 to 3,000 ft., from 240 deg., 70 miles per hour. Poor visibility and very low cloud. As front passes, wind veering suddenly to north-west with severe squall. In rear of front, surface wind north-west, light, upper wind 2,000 to 3,000 ft., from 320 deg., 20 miles per hour. Visibility rapidly improving and sky clearing.

"In northern Scotland and Northern Ireland, light west or north-west winds, broken cloud, good visibility."

It should be noted that the direction and speed of the wind are subject to possible variations of 10 deg. and 5 miles per hour, respectively, on either side of the figures given in the forecast. Thus, if a direction is given as 245 deg., this indicates that the forecasted direction lies between 235 deg. and 255 deg., while if the speed is given as 30 miles per hour, the forecasted speed lies between 25 and 35 miles per hour.

**Navigational Warnings.**—While conditions of bad visibility prevail in the vicinity of Biggin Hill and Kenley on the Croydon-Lympne air route, the statement "For regulations in force in Biggin Hill area" will be included in each broadcast. When conditions of bad visibility cease, the statement "Fog regulations cancelled in Biggin Hill area" will be included in the succeeding broadcast.

\* Coventry and Southport are supplementary, only one report per day being broadcast.

Details of the fog regulations referred to are given in the Air Pilot, Volume I, Part 12.

Navigational warnings other than the above will be included at the end of the meteorological forecasts only. These warnings will normally only be broadcast prior to the distribution of a Notice to Airmen, and will be omitted from the broadcast as soon as distribution of the Notice has been effected; in the case of a warning of a sudden and transitory nature, however, the broadcast warning may not be followed by the issue of a Notice to Airmen.

When no navigational warning is to be broadcast, the statement "Navigational warnings—nil" will be made at the end of the meteorological forecast.

**Times of Broadcasting.**—The times of broadcasting are as follows:—

*Winter Time-table* (when British Summer Time is not in operation):—

G.M.T.

0845 Weather reports based on 0700 observations.

0930 Forecast for the period from the time of issue until dusk, and navigational warnings.

1030 Weather reports, including recent observations on the S.E. route and from supplementary stations elsewhere.

1130 Weather reports based on 1000 hours observations.

1230 Forecast for the period from the time of issue until dusk, and navigational warnings.

1430 Weather reports based on 1300 hours observations.

1530 Weather reports: Observations supplementary to those given in the 1430 broadcast.

1630 Forecast for the following day and navigational warnings.

*Summer Time-table* (when British Summer Time is in operation):—

B.S.T.

0745 Forecast for the period from the time of issue until dusk and navigational warnings. (Not issued on Sundays.)

0930 Part I. Weather reports based on 0800 observations.

Part II. Forecast for the period from the time of issue until dusk and navigational warnings. (Sundays only.)

1030 Weather reports: Recent observations on the S.E. route and from supplementary stations elsewhere.

1130 Weather reports: Recent observations on the S.E. route only.

1230 Weather reports based on 1100 hours observations.

1330 Forecast for the period from the time of issue until dusk, and navigational warnings.

1530 Weather reports based on 1400 hours observations.

1730 Part I. Weather reports: Recent observations on S.E. route only.

Part II. Forecast for the following day and navigational warnings.

1830 Weather reports based on 1700 hours observations.

In order that the Air Ministry may assess the utility of broadcasting weather reports and forecasts and, in particular, navigational warnings, the co-operation of airmen who regularly receive and make use of these broadcasts is invited.

It is therefore requested that such persons will notify the Air Ministry by postcard addressed to The Secretary, Air Ministry (C.A.4), Adastral House, Kingsway, W.C.2, giving the following information:—(1) Name and address; (2) the purpose for which the broadcasts are received; (3) the regularity of reception.

## R.A.F. Accidents

THREE service aircraft were involved in accidents while returning from the Coast Defence Exercises, all caused by bad visibility. A Fairey "Gordon" of No. 40 (Bomber) Squadron, Abingdon, crashed at Bamborough, Northumberland, on Tuesday, September 26, and caught fire. The pilot, F/O. Norman Charles Meyrick, and the observer,

No. 563496 AC. (First Class) Maurice Albert Charles White, lost their lives. A second machine of the same squadron was lost at sea, probably off the coast near Hartlepool. The pilot, No. 370857 Sgt. John William Eric Christian, and the observer, No. 363626, Cpl. Aubrey Cleaton Lewis, are presumed to be drowned. A third machine crashed, but with no damage to the occupants.



# Correspondence

The Editor does not hold himself responsible for opinions expressed by correspondents. The names and addresses of the writers, not necessarily for publication, must in all cases accompany letters intended for insertion in these columns.

## "PER BOLONEY AD ASTRA"

[2876] The editorship of a leading aircraft journal invests the holder, I presume, with a certain amount of influence or professional interest with or in the activities of his contemporaries.

I assure you this is a relevant supposition. Conservatism claims my respect to the point where, having been used to the 8.30 duly appearing at 8.30, or left stick giving bank in the natural inclination, it would be surprising in the former case to discover an alteration in the time-table without due notice being given, and in the latter a bit of a shock if the "right" wing dipped instead of "left." Which shows my appreciation of Order.

But you may say "What possible topical bearing has this preamble on Aviation." I'll get to that in a moment, as the bishop remarked to the chorus girl.

There is no doubt that the daily newspaper is a great national institution, and having some time ago adopted the scheme of enlarging my meagre library without additional expense(?), have now become every morning the recipient of the efforts of one of our big "sheets."

On Saturday, the 23rd, whilst at breakfast and engaged in the process of circumnavigating the product of the *citrus decumana* and getting on quite nicely thank you, the paper came.

Splashed the entire width of the front page, this:—"Air and Sea War Tests." This is going to be good. So the Falcons were to be unhooded and the muzzles taken off the Bulldogs, the unofficial prize to the victors being a packet of more or less expensive bird-seed or a brand new collar with spikes. Ah! Thinks I to myself, this is going to be interesting. The justification or otherwise of either's existence to be proved. Reading a little further I made a startling discovery.

The editor of this particular paper had apparently had a "large evening" somewhere West, Friday night, because the comic section had somehow managed to insinuate itself upon the front page. The Front Page mark you! And yet somehow it wasn't quite so much a funny story as a fairy story, and not written by Hans Anderson either but by Our motoring co-respondent, and again the story was not concerned with cars but with an account of our military aircraft. I know now how Alice felt in Wonderland.

For the benefit of those who missed it, let me quote:—"We strap on our parachutes and fasten on our life jackets. I am the machine gunner strapped into the cockpit in the tail of the machine."

"Travelling at a speed of 160 miles an hour we are soon 10,000 ft. above the Forth Bridge . . . I get a kick in the back from my precarious perch in the gunner's cockpit" . . . and on and on in the same strain.

Hannen Swaffer said of himself recently "I'm a reporter." Had he written the above and said "I'm an explosive"—that also would have been true.

I may be pardonably excused for assuming the machine with the cockpit "in the tail" to be a "Virginia." But travelling at 160 and climbing, Well, Well, Well, wot neckst? Therefore I look to you as a "champion of the cause" and an upholder of the Truth, to suggest diplomatically to your worthy contemporary, that he restrains the youthful enthusiasm of his budding "Special" give him another "Kick in the back," and tell him to confine himself to Fact and leave the funny business to Tom Webster or Uncle Nat.

If these sort of reports are allowed to continue we may as well throw in the towel, say "goodbye" to Order and all go mad together. In such a world of Chaos we would probably in time become accustomed to Collinson Owen reviewing "It happened next week," Mr. MacDonald's decision to reside in England, the Mollisons flying non-stop backwards round the world, and Mr. Thomas in topee and shorts as a famous "hexplorer." But if things are to proceed in a normal, orderly manner, it would be much more satisfactory if Motoring news is reported by the Motoring Correspondent, Beautiful Women I met this week, By the Breezy Bishop whose non-de-plume is "Hotcha," Hitler and Germany by Vernon Bartlett and so on. I sincerely trust that having the interest of flying, whether civil or military, you will do all you possibly can to prevent reports creeping into the Press, which might mislead foreign countries into believing a great majority of our service aircraft are Schneider Trophy machines artfully disguised as twin-engined bombers.

"M. E. H-R."

Plymouth,  
September 25, 1933.



# Book Reviews

*An Airman Marches.* By H. H. Balfour. (Hutchinson & Co., Ltd., London.) Obtainable from FLIGHT Offices, 18s. 6d., post free.

CAPT. H. H. BALFOUR, M.C., M.P., though only thirty-five years old, has already had enough excitement in his life to satisfy all but the most exacting people. In his book he takes his readers from the early days when he was at school at the beginning of the war down to his present occupation as a company director and a Member of Parliament. His is a critical mind, and he has an outspoken nature, so his book is both candid and heterodox. He has many amusing anecdotes to tell and he does so in an entertaining manner, which shows that his journalistic training after the war was a training by which he profited.

The impressions of his fellow Members of Parliament, which he has committed to paper in this book, are both informative and interesting, and his loyalty to Mr. Baldwin, his party leader, is obvious and unswerving.

He has managed to pack his pages with facts and has wisely eschewed the use of padding. At times he is provocative, as when he criticises the use of obsolete aeroplanes during the war; in this connection he says:—

"Undoubtedly at this time the Sopwith two-seater was terribly obsolete, and we were suffering from this fact. Bad as we thought our lot, however, it was really nothing to that of the pilots and observers in the Artillery Observation squadron, who were still equipped with the miserably slow and badly armed BE2C's. These used to be knocked down by the Germans when right over on our side of the lines in almost dozens daily all along the Front. . . . Of course, the Government and the authorities at Home got whitewashed, as authorities nearly always do . . . but the fact remains, and I am not reluctant to make the statement and meet a challenge on it, that the use of these obsolete aircraft on the Western Front against new Albatross Scouts used by the German flyers in the first quarter of 1917, was a reckless waste of human life, and which, had it not been for red tape and petty jealousies at home, could have been avoided. . . . The Royal Naval Air Service did not have this official incubus to contend with, and the result was that, at any rate up to the middle of 1917, their aeroplanes were of better performance and more modern design than those of the R.F.C."

## INVERTED FLYING AND THE COMPASS

**W**E have been asked whether "throwing a machine about" or flying inverted damages the compass as ordinarily used in light aeroplanes, and have therefore obtained the following details from Smith's Aircraft Instruments, who market the well-known Husun range of aircraft compasses. In their compasses the pivot is attached to the magnetic system, and the jewel is secured to the upright in the bowl. When the compass is inverted the magnetic system with the pivot falls away from the cupped jewel and is prevented from falling too far by resting on a collar or baffle ring which is fitted for this purpose, and so arranged that when the compass is returned to normal position the pivot engages in the jewelled cup without fail. It will be seen from this that in inverted flight the magnetic system is supported on the relatively large area of the collar instead of on a pivot and will not therefore revolve freely. It is just possible that the magnetic system may, during prolonged inverted flights, work round to somewhere near its proper direction, but this cannot, of course, be regarded in any way as a true directional indication. While on the subject of Husun compasses there are a few more notes which may be of interest to users. They are manufactured by Henry Hughes & Son, Ltd., and marketed throughout the

world by Smith's Aircraft Instruments, of 185, Great Portland Street, London, W.1. They are aperiodic compasses and are manufactured under the Campbell-Bennett patents, and are, of course, fully approved by the Air Ministry for Service and civil aviation. They are made in numerous versions to suit all requirements, the most common of which are the P.4, the S.O.2 (this type was incidentally fitted to the 24 Savoia Marchetti flying boats of the Italian Air Force which recently visited America) and the Mark III.A. This latter is probably the most popular light aeroplane compass, and is standardised by many makers throughout the world. The 1933 model of this type has several improvements, one being the Sylphon tube for the expansion chamber. This is designed to eliminate the possibility of bubbles forming in the compass bowl through changes of temperature due to altitude or other causes. Cobalt steel magnets, which exert a far stronger magnetic pull than ordinary steel magnets, are also used in this latest model. Another improvement is the fitting of a single lever-operated clamp for the grid ring.

Finally, all Husun compasses are supplied with the micro-adjuster, which obviates the necessity of having a variety of small magnets for correction purposes.



### A New Fireproof Material

MAJ. VAN ROLLEGHEM, a Belgian officer, on Friday, September 29, demonstrated at Heston a new material which he claims to be fireproof. The exact composition of this material was not disclosed, but it appears to be something in the nature of asbestos sheeting encased in some form of mica. A little model of an aeroplane made of this material stood in blazing petrol flames for the space of several minutes and seemed none the worse, neither was the little machine made particularly hot. A tin of petrol made of this material was placed in the cockpit of the model and again flames enveloped it, but the petrol tin did not explode. Two white mice were also placed in the cockpit and underwent an ordeal by fire, emerging alive and apparently none the worse. Maj. Van Rolleghem then placed himself behind a screen of this same material while

a petrol fire was lighted in front of it, the flames being blown against the shield by the slipstream from an aeroplane being run up on the ground; Maj. Rolleghem was, of course, not burned, and it was noticed that the inside surface of the shield was only slightly warm. Another experiment was made with a tank which was stated to be lined with another special substance; this tank was battered about with considerable vigour, but showed no signs of bursting. Maj. Rolleghem states that it is his intention to build a larger model of a machine in the cockpit of which he will be able to place himself while flames are lighted around. The demonstration itself was convincing enough, but before any real importance can be attached to it a similar demonstration must be given on a larger scale, and a little more divulged concerning the material, to wit, its weight, strength, etc.



I.A.T.A. : Delegates from all the principal air companies in Europe attending the conference of the International Air Traffic Association, at Old Hall, Lincoln's Inn, September 27.



# THE ROYAL AIR FORCE

London Gazette, September 22, 1933

The name of the follg. officer, which was brought to notice by Air Vice-Marshal E. R. Ludlow-Hewitt, C.B., C.M.G., D.S.O., M.C., Air Officer Commanding, Iraq Command, for distinguished service rendered during operations in Southern Kurdistan during the period October, 1930-May, 1931, should be added to the list of names published in the *Gazette* of May 6, 1932:—Col. (Hon. Brigadier-General) (local Major-General) H. Rowan-Robinson, C.M.G., D.S.O., ret. pay (Reserve of Officers).

London Gazette, September 26, 1933

## General Duties Branch

The follg. are granted temporary commns. as Flying Officers on attachment to R.A.F. (Sept. 17):—Sub-Lieuts., R.N.: N. K. Campbell, P. M. Gregory, G. S. Lamb, G. A. L. Woods. Lieuts., R.M.: F. S. May, R. T. Partridge.

P/O. R. Sorel-Cameron is promoted to rank as Flying Officer (June 9); P/O. E. F. J. L'Estrange takes rank and precedence as if his appointment as Flying Officer bore date Oct. 16, 1931, immediately following F/O. R. B. Lees on the gradation list. Reduction takes effect from July 18: Air Vice-Marshal Sir T. I. Webb-Bowen, K.C.B., C.M.G., is placed on retired list at his own request (Sept. 26); F/O. R. W. H. Harrison relinquishes his short service commn. on account of ill-health (Sept. 23): Lt.-Com. C. John, R.N., Flt. Lt., R.A.F., ceases to be attached to R.A.F. on return to Naval duty (Sept. 18); Lt. I. M. Martineau, R.N., F.O., R.A.F., relinquishes his temp. commn. on return to Naval duty (Jan. 12, 1932). (Substituted for *Gazette* Feb. 2, 1932.)

The follg. relinquish their temp. commns. on return to Naval duty:—Lt. Com. C. A. R. Gibb, R.N., F/O., R.A.F. (Aug. 29); Lt. E. J. E. Burt, R.N., F/O., R.A.F. (Aug. 29).

Lt. Com. S. T. Morgan, O.B.E., R.N., Flt. Lt., R.A.F., relinquishes his temp. commn. on retirement from the Royal Navy (Sept. 15).

## Stores Branch

The follg. Flying Officers are granted permanent commns. on transfer as

commissioned engineer officers with effect from Sept. 11 and with seny. of dates stated:—J. T. Brown (Jan. 5, 1931); T. E. Guttery, M.B.E. (April 19 1932); F. G. Hammond (April 20).

## Accountant Branch

F/O. R. Cassels is restored to full pay from half-pay (Sept. 15).

## Miscellaneous

The follg. Warrant Officers are granted permanent commns. as Flying Officers on probation with effect from the dates stated and with seny. of Sept. 11:—

*Commissioned Engineer Officers.*—W. J. Loughhead, D. H. Newton, M.B.E. (Sept. 11); W. R. Mayes, D.S.M., A.F.M. (Sept. 19).

*Commissioned Signals Officers.*—F. Wilmshurst, D.S.M., W. G. Swanborough (Sept. 11).

*Commissioned Armament Officer.*—R. H. Garner (Sept. 11).

## ROYAL AIR FORCE RESERVE RESERVE OF AIR FORCE OFFICERS

### General Duties Branch

Pilot Officer on probation A. J. S. Morris is confirmed in rank (Sept. 5); Flt. Lt. W. H. Stiles is transferred from Class A to Class C. (Sept. 25); Flt. Lt. E. C. G. Badcock relinquishes his commn. on completion of service (Sept. 20); P/O. J. R. Wardrop relinquishes his commn. on completion of service (Sept. 23).

## AUXILIARY AIR FORCE

### General Duties Branch

No. 604 (COUNTY OF MIDDLESEX) (BOMBER) SQUADRON.—P/O. R. L. Nimmo is promoted to the rank of Flying Officer (Sept. 8).

No. 607 (COUNTY OF DURHAM) (BOMBER) SQUADRON.—J. A. Vick is granted a commn. as Pilot Officer (Sept. 4).

## ROYAL AIR FORCE INTELLIGENCE

**Appointments.**—The following appointments in the Royal Air Force are notified:—

### General Duties Branch

*Flying Officers:* D. A. Cameron, to No. 811 (F.T.B.) Sqdn., 13.9.33. W. P. Harvey, to No. 100 (B.) Sqdn., Donibristle, 13.9.33. R. A. McMurtrie, to Elect. & Wireless School, Cranwell, 18.9.33. G. E. Sampson, to R.A.F. Base, Calshot, 18.9.33. M. F. D. Williams, to No. 811 (F.T.B.) Sqdn., 12.9.33.

*Pilot Officers:* R. Faville, to No. 7 (B.) Sqdn., Worthy Down, 16.9.33. S. E. MacKenzie, to No. 19 (F.) Sqdn., Duxford, 16.9.33. R. G. S. Morgan-Smith, to No. 16 (A.C.) Sqdn., Old Sarum, 16.9.33. H. G. L. Allsop, to No. 84 (B.) Sqdn., Shaibah, Iraq, 25.8.33. A. Golding, to No. 100 (B.) Sqdn., Donibristle, 18.9.33. H. M. Russell, to R.A.F. Base, Calshot, 18.9.33. G. J. Spence, to No. 70 (B.T.) Sqdn., Hinaidi, Iraq, 25.8.33. N. W. Wakelin, to No. 70 (B.T.) Sqdn., Hinaidi, Iraq, 25.8.33.



## Foreign Officers with R.A.F. Units

The following attachments are notified:—Lt. Ala, Lt. Gharai, Persian Military Air Service, to School of Photography, 4.9.1933. Lt. S. K. Lee, Lt. Li-Shou Chen, Chinese Air Service, to No. 3 Flying Training School, Grantham, 9.10.1933, for 11 months' course.

## Move of Headquarters, Royal Air Force, India

HEADQUARTERS, Royal Air Force, India, will move from Simla to New Delhi on October 7, 1933.

## Nomenclature of Aircraft—Scapa

The official name of the Supermarine Flying Boat to Specification R.20/31 (formerly known as "Southampton, Mark IV") is "Scapa." This



## The Air Force Artists' Association

The first annual Exhibition of the Air Force Artists' Association was opened at the Natural History Museum, South Kensington, by Lord Londonderry, on Monday, October 2.

In his opening speech, Lord Londonderry expressed his satisfaction that R.A.F. personnel should come together on such occasions and discuss topics other than "shop," for, he said, there is no link like the appreciation of art. If the brush superseded the pen, he might receive artistic documents from Air Marshals, to which he would be unable to reply in an artistic fashion.

As the work is mostly by those who fly, or have flown, it is not surprising that the love of the open air is expressed over and over again, but one is struck by the dearth of pictures of aircraft and Air Force life.

The work of Group Capt. Roderic Hill, which is well known to readers of *FLIGHT* of a few years ago, was, however, much admired. His paintings "Bristol Monoplanes," "The Estuary" and "The Bazian Pass" showed what a wealth of fresh beauty is available to those who take to the air for inspiration.

Capt. C. E. Turner is another artist whose pictures of flying are well known. His impressive painting of a flight

name is to be used in all correspondence and reports relating to this type of flying boat.

## No. 56 (F) Squadron at Roborough

No. 56 (Fighter) Squadron will be stationed at Roborough Aerodrome Devon, during the period October 2 to 14, 1933.

## No. 70 Squadron R.A.F. Reunion Dinner

The annual reunion dinner for the officers, past and present, of No. 70 (Bomber Transport) Squadron will be held at the Royal Air Force Club, 128, Piccadilly, on Friday, December 1st. For particulars apply to C. D. Griffiths, Royal Air Force Club, 128, Piccadilly, London, W.1.



of Bristol Fighters patrolling the Kurdish Frontier was widely admired. It drives home very forcibly what the old "Brisfits" had to cope with. Capt. Turner, it will be remembered, has executed some very fine paintings of aircraft for the Blackburn Company during the past few years.

Two pictures by C. Noel Heath, the first, "Flight," depicting three wild birds, and the second, "Sea Lions," were delightful both in composition and colour.

The work of Group Capt. A. C. Winter, Secretary of the Association, was prolific. We liked his "St. Tropez" particularly.

Lady Brooke-Popham's "Study" showed great imaginative powers. We would liked to have seen more of her work.

In talking of pictures of particular merit, we would mention "Intelligentsia," by Stanley Grayson, "Winter, near Halton," by H. J. F. Hunter, the portraits of H. Lee, and the delightful landscape by Muriel Borton, F. H. Mackintosh, J. H. B. Carson and G. P. Grenfell. Drawings and etchings were few, but the wash drawings of A. R. Laird were very pleasing in their directness.

The exhibition, which is open, free, from October 3-14, should be a treat for anyone, and a benefit to R.A.F. charities.

## AIR POST STAMPS

By DOUGLAS ARMSTRONG

(Editor of "Stamp Collecting")

### British Air Stamps Obsolete

SUSPENSION of the two British air post services recently put in operation between Cardiff and Plymouth and London and Plymouth will lend added interest and value to the private stamps provided by the companies concerned, as well as to the rather limited number of "flown covers" carried from point to point during the brief period that they functioned. The somewhat crude yellow label of the International Air Lines, Ltd., must of necessity prove the scarcer in course of time, since it was in use for barely three weeks all told, whereas the G.W.R. air mail stamp had time to find its way into more general circulation. Whilst it is understood that neither of these vignettes will be reissued in the same form, either can be picked up by collectors to-day at a trifling percentage upon face value. In years to come, however, they may be treasured as souvenirs of the first attempts to introduce local air mail services in the British Isles.

Next year there is every prospect that their number will be increased as the result of additional air routes that it is proposed to open up between Liverpool and the Isle of Man, Southampton and Jersey, etc.

### India-Ceylon Air Post

Within the next few months it is probable that a regular air mail system will be operative between India and Ceylon as part of the Indian National Airways, as well as between Calcutta and Rangoon. It will be interesting to see what this produces in the way of special stamps, or cachets. India already has her own distinctive stamps for air mail purposes, but there is reason to believe that supplementary values are contemplated in connection with the latest developments, and it may even be that Ceylon will be furnished with stamps of a similar nature, although as a Crown Colony she would have to obtain the sanction of the Colonial Office, which, in a general way, sets its face rigorously against such emissions.

### More "Zepp's" in View

The Post Office Department of the United States announces its intention to issue, on or about October 19, a special 50 cents air mail stamp for exclusive use upon letters to be carried by the *Graf Zeppelin* on her return voyage after visiting the Century of Progress Exhibition at Chicago. The first portion of the mail is to be picked up at Miami, Florida, en route from South America, and correspondence addressed to places in North America, etc., will be dropped at the Windy City, but whether or not these will bear the new "Zeppelin" stamp remains to be seen. The fee will be the same as for letters carried all the way to Friedrichshafen and points in Europe.

It is noteworthy that the last issue of U.S. "Zeppelin" post stamps made in 1930 now stands at a substantial premium, the three values being quoted in the latest stamp catalogue at £5 15s. unused, and £6 15s. in used condition.

### Santos Dumont Stamp

As foretold some time back, Brazil has paid tribute to the memory of her most distinguished aero-pioneer by the creation of a particular impost stamp of 100 reis, the use of which was obligatory upon all inland air mail despatched upon a certain date in August in addition to the regular air post fee, and the proceeds devoted to a fund for the construction of new aerodromes in that country. The stamp is oblong in shape, with a design of the head and shoulders of Icarus printed in red-brown.

### Towards the "APEX"

Arrangements for the great international air post exhibition (APEX) in London next May are well advanced, and Mr. Fred J. Melville, the organising director, tells me that he has the promise of many more exhibits than will fill the space available at the Royal Horticultural Hall, Vincent Square, where the event is to be staged. A remarkable feature is the number of lady collectors who are associating themselves with the exhibition. A Ladies' Council has been formed, which includes the names of Lady Dorothy Downe, Lady Dunlop, Mrs. Anson McCleverty, Miss Honor Elwes, Miss G. L. Collins, Miss W. Penn Gaskell and others active in air post collecting.

It is expected that the preliminary prospectus will be ready for distribution in a few weeks' time.

## AIR MAIL SERVICES

(Concluded from page 996)

### Secretary of State's Reply

Lord Londonderry stated he was very glad to welcome the deputation, in view of the great interest taken by the London Chamber of Commerce in the development of air mail services. He fully agreed with what the deputation had said as to the desirability of improving the efficiency and speed of air mail services, and of increasing the use made of them by the public.

The deputation had put their case very well, and brought forward a number of interesting points. There were, of course, certain sections of the Empire routes over which night flying was hardly practicable at present; but, generally speaking, as the deputation themselves realised, the question of speeding up air mail services, either by night flying or by increasing the speed of the machines used, was mainly a matter of expense.

Imperial Airways were fully alive to the importance of reducing the times of their different journeys, and had recently effected accelerations in their Empire services. Lord Londonderry promised to give the points urged by the deputation the most careful and sympathetic consideration.

Sir Ernest Bennett, the Assistant Postmaster-General, said he was glad to be present at Lord Londonderry's invitation and listen to what the deputation had to say in so far as it affected the Post Office. He would certainly convey their views on these questions to the Postmaster-General.

■ ■ ■ ■ ■

### BRIEFLY

MR. W. A. ROLLASON has resigned his position as a Director of Rollason, Muir & Rickard, of Croydon and Ford Aerodrome, Yapton.

THE Growth of Imperial Airways is the subject of an article by Mr. D. H. Handover, Traffic Manager to Imperial Airways, which is published in the October issue of "Links," the house journal of Alexander Duckham & Co., Ltd., the makers of "Adcol" brand lubricating oils.

FROM now on the address of H. Hemming & Partners will be:—22, Queen Anne's Gate, London, S.W.1. (Telephone: Victoria 7340/41. Cables: "Empsurvey, Parl., London.")

THE well-known Portuguese firm of C. Santoo, Ltd., Rue Do Crucifixo, 55-59 (Predio Todo), Lisboa, Portugal, have been appointed agents for Portugal for D. Lewis, Ltd., 124, Great Portland Street, London, W.1.

WILL our readers please note that the head office of Titanine-Emailite, Ltd., has been removed to their works at Sheaveshill Avenue, Collindale Lane, N.W.9, where all communications should be sent. Telephone: Colindale 6868 and 6458; telegrams: "Tetrafree, Hyde, London"; cables: "Tetrafree, London."

■ ■ ■ ■ ■

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PATTERSON AIR TRADERS, LTD., Coventry House, 3, South Place, E.C.2.—Capital, £100 in £1 shares. Objects, to promote, assist and encourage aerial navigation in all its branches, and the construction of aerial conveyances or parts thereof, and to carry on the business of aeronautical engineers and advisers, etc. Directors: Arthur L. Patterson and Gabrielle Patterson, both of "Larchmont," Lymington, near Hythe, Kent.

■ ■ ■ ■ ■

### AERONAUTICAL PATENT SPECIFICATIONS

Abbreviations: Cyl. = cylinder; i.c. = internal combustion; m. = motors. (The numbers in brackets are those under which the Specification will be printed and abridged, etc.)

#### APPLIED FOR IN 1932

Published October 5, 1933.

7,303. W. LANGGUTH. Tailless aeroplane. (398,244.)  
30,433. AVIONS H. M. D. FARMAN. Clutch mechanism. (398,361.)

#### APPLIED FOR IN 1933

Published October 5, 1933

5,591. DORNIER METALLBAUTEN GES., and C. DORNIER. Retractable landing-gear for aircraft. (398,411.)



# Personals

## PREPAID

(18 words or less 3/6, then 2d. per word).

BILL, R.A.F., write Hilda, of Fort Paragon, Cliftonville.—Box No. 4184, c/o FLIGHT, 36, Great Queen Street, Kingsway, London, W.C.2.

### To be Married.

DAVIDSON : DAHLSTRAND.—The engagement is announced between FLIGHT-LIEUTENANT ALEXANDER PAUL DAVIDSON, R.A.F., son of Mr. and Mrs. A. Davidson, of Walton-on-Thames, and JANE ELIZABETH DAHLSTRAND, only daughter of Fru N. Dahlstrand, of Malmö, Sweden.

CHUBB : PAYNE.—The engagement is announced between Mr. PHILIP CHUBB, R.A.F.O., second son of Mr. and Mrs. J. B. Chubb, of Froyle, Hants, and ELIZABETH, only daughter of Dr. and Mrs. O. V. Payne, of Alton, Hants.

HARRISON : WHITEHEAD.—The engagement is announced, and a marriage will shortly take place, between FLIGHT-LIEUTENANT F. H. HARRISON, R.A.F., only son of the late Brig.-General Gilbert H. Harrison, C.B., C.M.G., and Mrs. Harrison, of Observatory House Hotel, Observatory Gardens, Kensington, W.8, and DORA, daughter of Mr. and Mrs. Joseph Whitehead, of 14, Highbury Road, Wimbledon Hill.

THOMSON : THOMPSON.—The marriage arranged between SQUADRON-LEADER I. W. H. THOMPSON, Auxiliary Air Force, and Miss SYBIL THOMPSON, will take place at St. Helen's Church, Eberick, York, at half-past two o'clock, on Wednesday, November 1.

### Married.

GUILFOYLE : CHILD.—On September 30, 1933, at St. Columba's (Church of Scotland), Pont Street, GROUP-CAPTAIN W. J. GUILFOYLE, M.C., R.A.F., to Mrs. ELSPETH CHILD, of Fleet, Hampshire.

### Deaths.

KENNEDY-COCHRAN-PATRICK.—Killed in air crash in South Africa, WILLIAM JOHN CHARLES KENNEDY-COCHRAN-PATRICK, D.S.O., M.C., only son of N. J. K. Cochran-Patrick, of Woodside and Ladyland, Beith, Ayrshire.

LIVINGSTON.—On September 26, 1933, in Paris, as the result of an accident, DIVA, wife of BRIG.-GENERAL GUY LIVINGSTON, late R.A.F.

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A. P. THURSTON & CO., Chartered Patent Agents, 329, High Holborn, W.C.1. Tel.: Hol. 1117. z

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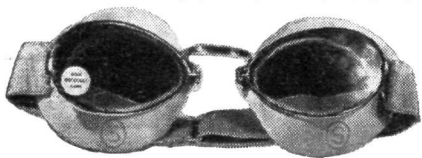
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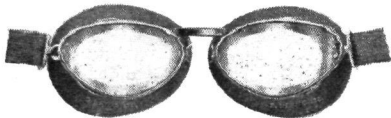
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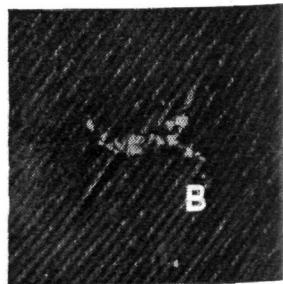
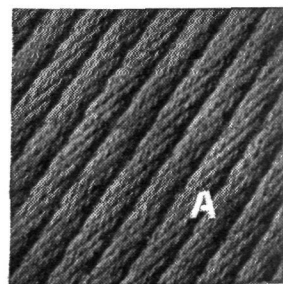


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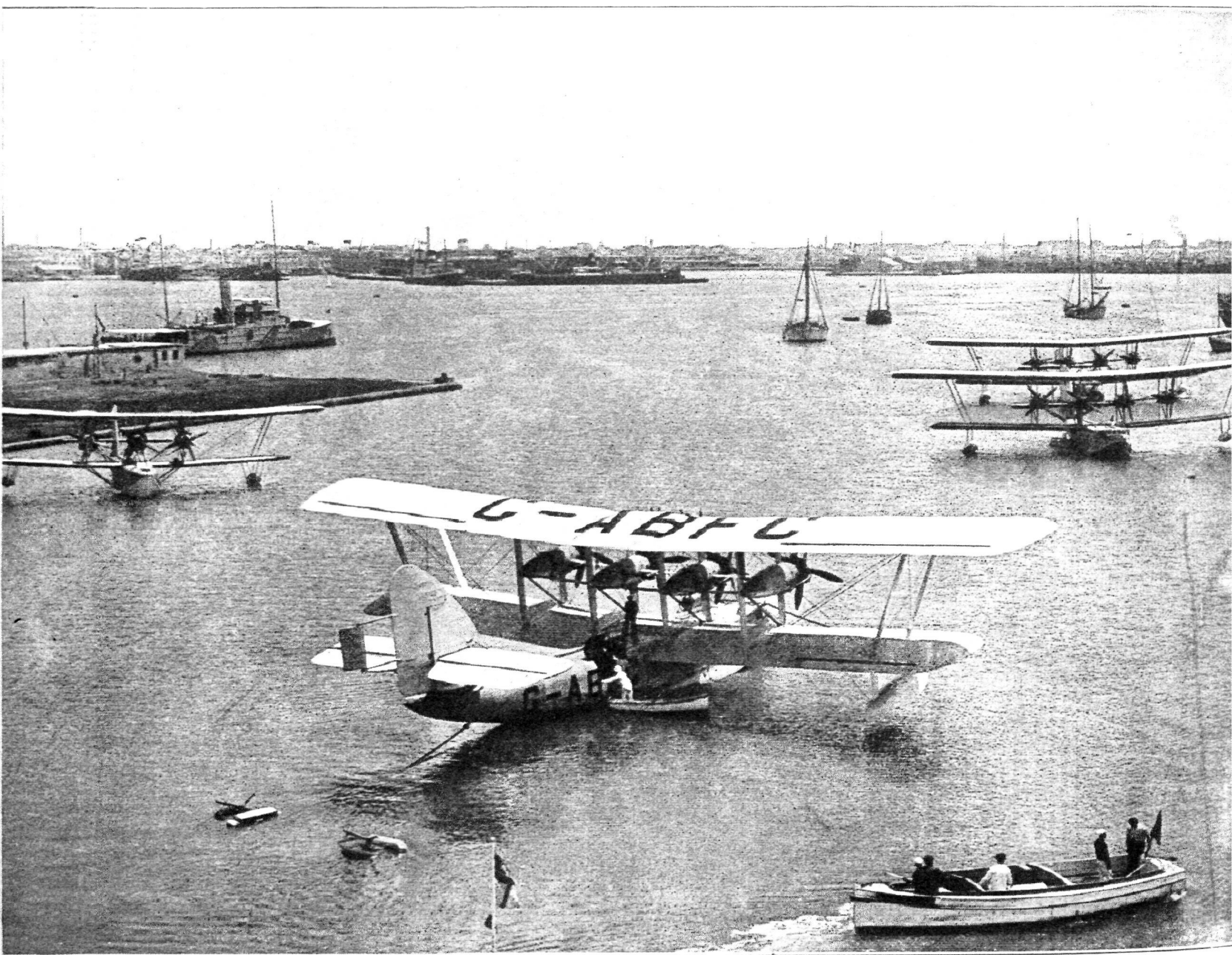
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